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PUERPERAL INSANITY:

An Analysis of One Hundred and Forty Consecutive Cases.

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During the years 1889, 1890 and 1891, 968 female patients were admitted into Rainhill Asylum. In 1891 restrictions were placed upon the number received, owing to want of room, but every endeavour was made to accommodate acute cases, and probably no well-established puerperal case was refused. These 968 patients were drawn from the poorer classes, and from an estimated female population of about 455,000. The births in this population were, during the same years, 98,065, a ratio of one case of puerperal insanity in 700 parturitions, leaving twins out of consideration. All these cases came from large towns, or from country districts where, owing to the prevalence of coal mines or factories, existence is maintained at the same high pressure standard which obtains in cities.

One is tempted to say that the value of the reproductive factor in the production of an attack of insanity varies inversely with the completeness of the history obtained, especially when we reflect how often this is got from the husband, who may be quite ignorant of his wife's family. Therefore I am in the habit of supplementing his account, where necessary, by that of the patient herself after recovery. And even where we do succeed in obtaining the best combination of informants, viz., the husband and both parents, the etiological difficulties in a case by no means vanish. Many persons have been, as their friends say, "queer" for years, but it requires the extra strain attendant upon the functions of reproduction to precipitate them into an attack of actual insanity. Others have

incompletely recovered from a former attack, and the present one is but partly puerperal in origin. There are the neurotic individuals, whose anxious forebodings or hysterical fancies place them upon the borderline of insanity, yet whom no one would pronounce proper subjects for asylum treatment. What asylum medical officer knows anything of such cases? Then we find women, whose pregnancies have followed one another with undue rapidity, falling victims to mental alienation if the last confinement has come upon them when debilitated by want, domestic tyranny, or actual physical disease; in these cases the amount of blame to be laid upon any one cause may be a matter of unsatisfactory conjecture. Chronic alcoholics and syphilitics, general paralytics, epileptics, and those already insane, all call for the exercise of much discretion. We are in a position to examine only established types, and I, like others, must take in this paper much from the friends' accounts which a medical man in private practice could examine into for himself. These things being considered, it appears that, of the 968 admissions referred to above, 140 were dependent wholly or chiefly upon the strain of reproduction, a ratio of 13.5. No great value is laid upon this ratio, seeing how uncertain a quantity the standard of insanity is, and further how the proportion of cases sent to asylums to those really insane varies in different districts and among different classes of society. Rural residence, opulence and ignorance lower it, urban surroundings, the spread of education, and facilities for obtaining medical advice raise it; nor is the variation in clinical type less important, states of exaltation being clearly less suited for home treatment than states of depression.

Division of Cases:—The insanities of pregnancy, parturition and lactation grade so insensibly into one another that any division must be to some extent arbitrary. Only half of our pregnancy cases were confined in the asylum, but this number includes all the typical examples of the "mania of pregnancy" in its restricted sense. The rest were generally melancholics, who, having grown worse after labor was over, were then certified. Yet we must draw the line somewhere, and therefore consider all cases those of pregnancy in which any recognisable alienation was found before the birth of the latest child.

The distinction between puerperal and lactational cases is even less satisfactory. Six weeks is the usual limit adopted by writers, some of whom allege that uterine involution is then complete, others that they fix it because the period covers the first half of involution. Now this process is altogether uncertain in the insane, and from want of recuperative power is probably always delayed. We cannot then take it as a ground of classification. The flow of milk is established within a week, if it be present at all, (and there is a tendency in some cases for the latter to occur), so that we are still at a loss. The drain of albumen cannot be reasonably blamed under four months, and is also useless as a guide. The only reasonable lines are to be drawn from the period of onset of symptoms. Of cases where the first signs appear after confinement, in 40 per cent. they appear within a month, and in 11 per cent. more before the second month has elapsed. In the third month the percentage falls to three, and from thence onwards never rises above four. Therefore all cases occurring later than two months from parturition are classed here as lactational, and our numbers are: Pregnancy 30, parturition 64, lactation 46. Total 140.

Symptoms:—Since the insanities connected with parturition present, with the exception of the "Mania of pregnancy," no clinical distinctions which would serve to separate them, they will be considered together, and only such remarks made upon the differences between those of pregnancy, confinement, and lactation, as are called for from time to time.

Prodromata:—There is a general agreement among authors that attacks of puerperal insanity, at least in the earlier months, are characterized by a sudden onset. It is quite true that in a large proportion of instances the first alarming sign, from the relatives' point of view, is a restless or feverish activity of mind and body, a wide-awake, bright-eyed, talkative excitement, passing, in a few days, or even hours, into wild delirium or unrestrained violence. But the more complete the early history is, and the better educated or more intelligent the informant, the less frequent do such cases appear. And, in fact, in the present series 54 per cent. have been found to have shown prodromal symptoms. Thus, in 70 per cent. of pregnancy cases the attack comes on as a gradually deepening depression, and is, as we might expect, often

prolonged for months. There appear to be three classes of exceptions to this general rule, viz., general paralytics, cases of recurrent mania, including brain syphilis, and those already chronic before conception. In these the onset is often very sudden, and prodromata may be absent. Among puerperal cases 50, and among lactational 52 per cent. commenced gradually. Here, as in pregnancy, the commonest alienation is an indefinite feeling of sadness, distrust, apprehension, or religious awe. A woman will spend an hour over her prayers, or will clasp husband or child in her arms with unaccustomed fervour. Or the exaltation of the cortical centres for common or special sensation may portend danger, and the ticking of a clock, usual street noises, or the pressure of her ordinary clothing become unbearable. Or the appetite may suddenly fail, or abnormal thirst develop, accompanied, it may be, by whimsical fancies in reference to some particular beverage. Again we may presage mental exaltation, if a hitherto peaceful woman develops a querulous or argumentative spirit, or from some utterly trivial cause gives way to unreasonable jealousy or anger. Or it may suddenly strike the easy-going housewife that she must be "up and doing," and she will proceed with quite ludicrous activity to various superfluous duties, and rail upon those who try to throw cold water on her efforts. Or she may develop a sudden economical turn, and speculate upon how she may save money hitherto disbursed in necessary expenses. And in fact innumerable variations from an individual's normal standard may excite suspicion. One woman suddenly cut up her husband's clothes to make garments for her children, and was unconvinced that some of these articles were prematurely devoted to that most laudable purpose.

After a varying interval graver symptoms may occur. Nearly always, when delirium is coming on, there is a tendency to talk a great deal, while ideation becomes confused, and incoherence develops. Or else previously existent depression deepens, and ill-defined apprehensions crystallise into actual delusions. It is at this period that the tendency to leave home, so common in many forms of insanity, makes its appearance, and a woman may be discovered wandering, partially dressed it may be, carrying her child, and unable to account for her proceeding. These purposeless errors are often wrongly supposed to indicate an intention to commit suicide. A less common form of aberration

is a spirit of childish, but not actually irrational, frivolity, a treating of the serious problems of life as of no moment. Allied to this is a condition of sexual exaltation, which may prompt a respectable woman to shock her husband by making lewd remarks or amatory overtures to a male friend. Rarely a stage of ill-balanced gaiety ushers in an attack of acute mania of a robust type, from which delirium is absent from first to last. More commonly things go gradually from bad to worse, and profound melancholia, active delirium, or the almost pathognomonic mania of pregnancy makes its appearance. It should be here stated that in this paper the word delirium, where external consciousness is wholly or mainly in abeyance, is used in contradistinction to mania, where that faculty remains.

Established Types of Pregnancy:—If the prodromal symptoms are those of depression, that stage may be much prolonged before the patient is certified. In our series, for example, of cases of pregnancy, fifteen were not admitted till after confinement. Yet they showed before that event such decided alienation that there are reasons for placing them in a group apart, and calling them transitional. Their clinical types resemble those of puerperal insanity rather than that of pregnancy, and they profoundly alter the statistics of the latter if included with them. Still, to save multiplication of classes, they have been so included. The average length of the prodromal stage in these fifteen cases was fourteen weeks, and eleven of them showed depression all through. We shall refer to the recovery rate later on.

States of depression cover 53 per cent. of all pregnancy cases. There is little of importance in the type, which may be one of pure melancholia, or accompanied by delusions or hallucinations. In nearly half the cases the patient imagines she is going to be killed or has committed the unpardonable sin, or else she combines the two ideas.

It is noteworthy that a delusion common among puerperal women,—that the husband is disloyal,—does not here appear in any great percentage. On the other hand, fancy often elevates him to the position of an instrument appointed by God to end a sinful and polluted life. There are no mental signs by which we can distinguish a case of melancholia of pregnancy, physical examination being necessary. It is far otherwise in the case of that well-

marked type of "mania of pregnancy" which must be looked upon as peculiar to the condition. This clinical type has not hitherto received adequate recognition from writers. It is decidedly uncommon, and is very unfavorable as regards recovery. Our series includes eight cases, a percentage of .82 of all admissions.

The cardinal point upon which the whole mind tone seems to turn is a profound perversion of all the apperceptions. The memory of past life and experiences is not greatly obscured, but the altered conditions of life, from the patient's new standpoint, dovetail so naturally into the old that the most extraordinary events cease to awaken astonishment. It can be gathered from the relation of the patient's feelings after recovery, though this is not always a trustworthy guide, and from observation of actions during the period of estrangement, that delusions of identity are present in every case. Always seen, too, is a substratum of depression, a feeling, in the less-marked cases, of anxiety that things should be as they seem, in graver cases, of fear that some harm may arise.

But as a rule this depression shows on the surface only as a profound suspicion of every one around. The life is almost wholly introspective. The woman is reserved, never speaks unless spoken to, and then with as few words as possible, or by a request for information as to why she should answer at all. She resists everything done for her, distrusting the motive. Yet if force be used she gives in with a sulky acquiescence, yielding without violence. She will not acknowledge that she is pregnant until near confinement, and then may say there is a dog, or elephant, or devil inside her. Nurses and other patients are taken for queens, dukes, jailors, or relatives, as the mood strikes her. In these delusions of identity there is none of the ready verbal acknowledgment of, or cheerful acquiescence in, the new relationship, such as is seen in the confusional state which accompanies alcoholic neuritis. The delusions appear in actions, not words, and explain many apparent incoherent utterances. In less marked cases there may be a desire to rise above the surroundings which are dimly recognised to be false, and she may apologize for being pregnant to some animal. In rare cases a state of ecstasy is seen, accompanied by excitement, and the patient will sing hymns, pray aloud, and throw herself into all sorts of frenzied attitudes. Religion always plays an important part in the drama, and associated with it is, as so often seen in other conditions, an exaltation of sexual feelings, prompt-

ing voluptuous or lewd remarks or indecent overtures. The husband is not regarded as a disloyal lover or avenging spirit, but as a casual acquaintance, although possibly endowed with imperial rank. When her child is born she does not turn against or seek to destroy it, but either neglects it altogether or refuses to acknowledge that it is her own. As to the rest, she will often feed and dress herself, and even display much neatness of attire. The habits are rarely dirty. She will often make her own bed, but rarely work except from a desire for her own comfort. When improvement occurs she becomes more silent and suspicious, and at last asserts that those who have hitherto humored her are chaffing her. Or she may commence to work weeks before she will converse rationally. Apart from the optical factor of the delusions of identity, hallucinations are not prominent, but gustatory, olfactory and auditory are met with. We may summarise the chief diagnostic points in the condition:

(1). Silent resistive reserve and unsociability.
(2). Strongly marked delusions of identity.
(3). Religious or erotic impulse.
(4). Rational performance of routine duties if left to her own resources.

Symptoms of insanity may make their appearance at any time during pregnancy, but are somewhat rare before the fourth month. The most typical cases of mania seem to arise in the fourth and fifth months. States of delirium are uncommon, occurring in only 16 per cent. of cases. They issue into melancholia in every case, and nearly always arise subsequent to delivery.

Puerperal Established Types:—The frequency of delirious excitement is recognised by all writers. It occurs in 46 per cent. of cases, in 31 of which the tone is gloomy and terrified, in 15 pleasurable. This distinction is of little value, seeing how often patients may fluctuate from depression to exaltation even in one day.

It is usual to talk of the desperately suicidal or homicidal impulses of these patients, and the general severity of the disorder. But in asylum practice they do not give rise to half the anxiety of quiet melancholics. Even if we admit that before removal from home they are placed under continual manual restraint by friends, still there must be moments when the vigilance is relaxed. Yet

in 29 cases of this type in the present series, only three had attempted suicide, and none had made any organized attack upon those around them. Among the delusions of puerperal delirium the most common is the belief that a violent death is impending, but false identity, religion in various phases, sight and hearing, also figure largely. Hallucinations are always present in delirium, and so a large percentage of puerperal cases exhibits them. Acute delirious mania is not very common, and the present series contains only two cases. But as the condition is a consequence of nervous exhaustion it would probably not be seen at all if all cases were at the commencement placed under vigorous medical treatment, especially as regards forcible feeding. If the form of insanity is melancholia, we should always consider the patient as actively suicidal, even after an apparently cheerful demeanour has been resumed. There is a greater tendency towards relapses in puerperal than in lactational cases, and these are often quite sudden. The commonest delusion is that affecting the family relationships; the husband has committed adultery, or lost his love for wife or child, or is plotting the destruction of one or both of them. Hallucinations are common. In states of exaltation there is generally much motor excitement. Such patients are talkative, argumentative, quarrelsome, violent, destructive, and of degraded habits. This is the clinical type in which, par excellence, sensuous impressions prevail; ordinarily virtuous women indulge in filthy and abusive epithets, self-exposure is common. To summarise:—Melancholia is present in 34 per cent. of puerperal cases, melancholic delirium in 31, mania in 20, maniacal delirium in 15.

It has already been mentioned that 40 per cent. of cases occur in the first month after confinement. Of these 18 occur in the first and 15 in the second week; 14 per cent. occur in the second month.

In taking the history one cannot avoid being struck by the number of cases occurring on the day in which the patient first gets up, or the day after. Weeding out such as rose from bed as the result of an incipient attack, there still remain many who appeared in perfectly normal mental health until the altered position of body altered the conditions of circulation and tissue metabolism. There certainly appears to be more than an accidental connection here.

Lactational Established Types:—It will be sufficient to say that the same symptoms as in puerperal occur, but the types are

in a different order of frequency;—24 per cent. show melancholic delirium, while states of quiet depression rise to 50. Mania is present in 12 per cent., maniacal delirium in 14.

PROGRESS OF CASES:—A convenient method of classifying types of puerperal insanity is to recognise that any given case may pass through six stages, viz.:—(1) Prodromal disturbance, (2) early delirium, (3) melancholia, (4) stupor, (5) mania, (6) dementia. Now many patients pass through all the first five and yet recover, but generally speaking the fewer the stages the better the prognosis. We have seen that prodromata can be recognised in 65 per cent. of histories, which means that they are present in many more. Such slight disturbances occur in many neurotic individuals who never require asylum treatment, and we may say that all who go no further than this recover. We have also seen that early delirium is a normal or usual stage. A large proportion of cases recover after it has lasted for some days, or a week or two, although, if it last longer than a week, the apathy of exhaustion is apt to be prolonged, and much confusion of memory result before convalescence is established. But a more usual issue is melancholia, which now joins hands with those cases depressed from the beginning, nor can it be said that the interpolation of delirium in a melancholic case lessens the recovery rate. But delirium may also issue in mania, in fact, nearly as often as in melancholia, and the change is easily recognised clinically. The patient becomes partially conscious of her surroundings, and can answer certain questions rationally, although attention is poor. She now takes food well, generally ravenously, and sleeps well at nights. The pulse becomes slower and stronger, and the general condition much improved. Instead of a weak, purposeless, unconscious agitation, a robust, boisterous, mischievous, and destructive excitement develops, in which the main feature is loss of inhibition. If the temperature has remained high, the case assumes a different aspect, such attacks of cerebritis being more grave than the fluctuating fever of delirium alone.

Stupor:—It may be said that almost every case of puerperal delirium or melancholia passes through a stage of mental confusion previous to recovery, during which the powers of observation and recollection are lowered. This is the nerve-cell exhaustion succeeding the abnormal state of brain nutrition which has been

present, and it passes off in a short time. A certain number of individuals, however, experience a graver suspension of mental function, and to these we now allude. It does not appear that the more strongly marked types of melancholia attonita, such as are met with in other insane conditions, are of frequent occurrence in the puerperal. But when melancholia or delirium is subsiding we may note an allied stuporose state, where there doubtless exists in the mind of the individual some dominant delusion which paralyses the outward expression of inward thought and feeling. Every action directed towards her is strongly resisted, food is refused, sleep is fitful and disturbed, and all the attention is concentrated upon eluding the fate which she imagines is in store for her, so that suicidal attempts may occur. Such a state appears always early in the history of the attack, and is not persistent. The acute depression shortly subsides, and the mind phase is transformed into simple stupor, which in this form may persist for a number of months. There is a partial suspension of ideation, never approaching completeness. Such patients after recovery are always able to recall the salient points of their illness, the names and faces of nurses who came to the ward after the stupor commenced and left before it passed away, and the approximate dates of any unusual events.

The fine edge of memory is blurred, observation is to some extent distorted, and judgment and reasoning fail if applied to any problem of intricacy. But such a thing as a total blank in life recollection, a chasm over which memory unwittingly bridges, a thread of routine picked up as if never broken—is wanting in puerperal stupor. Even in some of those cases which, apart from puerperal insanity altogether, develop primary stupor in a few days, such as Mr. Bevan Lewis* quotes as cases of acute primary dementia, it is possible to prove this contention. In some of these cases if the patient be subjected to a hot bath, and placed in water at about 110° F., which is gradually raised to 125° or 130°, the circulation is artificially restored, by the free flow of blood through the cerebral vessels, to something equivalent to the normal condition; and by this means the cardinal inhibitory element of stupor is by some means temporarily suspended; the patient becomes sensible, and may be cross-examined at leisure. After 40 to 60 minutes pre-

*Text-Book of Mental Disease, p. 158.

cordial depression is felt, and she is at once removed from the bath. Within half an hour the **stupor** is as deep as ever.

In the present series **seventeen** presented well-marked stupor, a percentage of 12.1. In six instances the melancholic element predominated over the anergic; of these three died of tubercular pulmonary complications (one acute miliary) and the other three recovered in two months. The rest, which remained from four to twelve months stuporose (average 6.8 months), were anergic. Only one case occurred among those insane from pregnancy, and the stage commenced after delivery. Eleven were in puerperal women, five in lactational. Stupor is more apt to occur in those cases which commence with delirium. Heredity was traced in over 50 per cent. In three catalepsy was prominent and persistent, and in these the stupor was profound. They all recovered when it had lasted from 9 to 12 months.

Mania,—apart from delirium, may occur in three connections, viz.: (1). The mania proper to pregnancy. (2). Acute mania as the outcome of delirium, constituting the principal feature of the case. (3). Late mania, following melancholia, or melancholia and stupor, preceded or not by delirium. We have already mentioned the first two. The third kind was present in 27 cases (19.2 per cent.). Of these seven were pregnancy (23.3 per cent.), nine puerperal (14 per cent.), and eleven lactational (23.9 per cent.). It is too much to say of the development of this late mania that "from that moment the patient was lost," but it certainly renders prognosis unfavorable in all but puerperal, of whom four recovered, 44.4 per cent. of those affected. All the pregnancy cases, and all but one of the lactational ended unfavorably. A constant factor in determining chronicity is found in the development of a fixed delusional state, with predominance of hallucinations of an unpleasant nature, by no means unlike that found in chronic alcoholic forms. And yet it differs from these. There is, as a rule, less mental enfeeblement, and degeneration proceeds, not along the lines of progressive dementia so much as in the direction of slow subsidence, after some months or years, of its more acute phases. The filthy and blasphemous remarks cease to be heard, poison is no longer put in the food, the patient's person is no longer tampered with. Hence it is that from being among the most dangerous inmates of the turbulent wards, such women drift gradually into the class of rough workers, stone floors, or fold in the

laundry, and are ultimately, it may be, removed from the asylum "relieved." Those who recover appear to suffer less from torturing delusions and hallucinations. They are often boisterous, dirty, and destructive, the intellectual faculties are temporarily enfeebled, and judgment and attention abolished, but they rarely make attacks of organised violence upon those around them, in return for fancied insults, or imagine that the asylum is a large torture chamber. It is only right to say that exceptions to this rule occur, but even then the delusions of suspicion are not firmly fixed.

Precedent delirium or sequent stupor does not make prognosis worse in melancholic cases which become maniacal. But it may be noted that in none of those who recovered was the stupor of long duration, nor did it ever approach complete anergia with cataleptic fixation. All the recoveries among this latter class omitted the mania stage.

Profound dementia is a far from common ending to puerperal cases. When it does result, it generally arises directly out of profound or prolonged stupor. Leaving out general paralytics, our present series exhibits only two cases. Both were over 35 years old and had suffered previous attacks. I once met with a lactational case who became very demented after mania, but she was 49 years old on admission.

ÆTIOLOGY.—*Age:*—From whatever point of view we regard a table of ages in puerperal insanity we are unable to attach any special importance to the factor. The average age of puerperal cases proper is in the present series 28.8, that of pregnancy and lactational 31.7. But the majority of the former cases occur at first confinements, more of the latter with subsequent pregnancies. Then the absolute number of cases increases up to the age of 30 or 32, but there are more women of the population married at these ages than earlier. Again puerperal cases show a larger percentage of recoveries than those of pregnancy or lactation, and the unfavorable cases are those over 30 years old; although this holds good of any type of insanity.

TABLE I.—AGE ON ADMISSION OF CASES, IN QUADRENNIAL PERIODS.

AGE.	PREGNANCY.			PUERPERIUM.			LACTATION.		
	Recovered.	Chronic.	Died.	Recovered.	Chronic.	Died.	Recovered.	Chronic.	Died.
19–22	2	1	1	7	..	1	1	..	..
23–26	..	1	..	15	2	2	3	3	1
27–30	2	4	..	9	2	2	6	..	2
31–34	1	4	2	7	..	1	9	4	6
35–38	6	3	..	8	3	1	5	3	1
39–42	2	1	..	2	1	1	2	..	..
Totals	13	14	3	48	8	8	26	10	10

TABLE II.—AVERAGE AGES.

	All Cases.	Minimum.	Maximum.	Average of Recovered.	Average of Chronic.
Pregnancy	31.7	20	42	32.8	31.5
Puerperium	28.8	19	42	28	31.2
Lactation	31.7	20	41	31.7	30.1

Two points are worthy of note:

(1). Labour is an acute strain upon the organism, but is a short time in operation. Therefore neurotic women tend to give way at the first chance their life presents, *i. e.*, at the first confinement, which is generally before the thirtieth year; and the recovery rate is high.

(2). The mania proper of pregnancy is a disease of the waning period of reproductive activity; the average age of this limited class is 33.26 years.

Number of Pregnancy:—An attack may follow any conception, but certain differences of liability exist. In the pregnancy cases there is little variation in the numbers from the first to seventh. As the average woman is not pregnant seven times, this shows a slight balance in favor of the later. Even the restricted mania of pregnancy does not appear more common with later conceptions, although several well-marked cases had suffered from puerperal attacks before. Confinement insanity is much more common in primiparæ (over 25 per cent. of all cases), although frequent up to the fifth. Lactation is distinctly a cause in multiparæ (fifth child causes 23.9 per cent.) especially from the third to seventh. Compare in this connection the common experience of sane multiparæ that the milk failed progressively earlier after each preg-

nancy, and with advancing years a source of exhaustion was thus eliminated.

Previous Attacks:—Among all classes of our cases first attacks are the rule (pregnancy 73.3 per cent., puerperium 79.6 per cent., lactation 71. 7 per cent.) This is only to be expected, since reproduction is the most severe physiological effort an average woman under middle age is called upon to make. If among pregnancy cases a former attack has occurred, that attack was in nearly every case puerperal. In two instances two previous had occurred, and were—first lactational, second puerperal.

Previous attacks had occurred in 13 individuals among the confinement class, a percentage of 20.3. Seven had one previous attack, but in only two instances was this puerperal. Drink was the commonest cause of frequent relapses, probably because intemperate women drink more when pregnant or nursing than at other times.

Thirteen individuals (28.2 per cent.) among the lactational class had been previously insane, representing eight puerperal, four lactational and one pregnancy previous attacks.

These numbers are too small to permit of decided inferences, but from the inclusion of other cases two points may be noted:—(1). Successive relapses are common in connection with reproduction but vary in time of onset. As a general rule the earlier illnesses occur soon after delievery. Later on, owing probably to better care being taken of the general health, the onset is deferred till lactation is established. As age advances this safeguard fails, and such women tend to become chronic as pregnancy cases. (2). Successive attacks tend to be more prolonged, recovery to become less perfect. Therefore, if a woman is admitted with a history of a previous attack lasting over nine months, the prognosis is unfavorable. None in the present series who fulfilled this condition have recovered, whatever the ætiology or clinical aspect.

Heredity:—Of all the 968 admissions during 1889–1891, a percentage of 28.2 showed hereditary taint, although in 163 instances no history at all could be obtained. Now a history was got in nearly all our puerperal cases, but heredity in only 25 per cent. The husband was the most usual informant and was not, in some cases, well-versed in his wife's family history.

Subdividing our classes we get among pregnancy cases, direct heredity 16.6 per cent., collateral 10 per cent., total 26.6 per cent.; puerperal 18.7 per cent., lactational 30.4 per cent., both equally divided between direct and collateral. Among the lower classes intemperance in the father is a far more common predisposing cause than actual insanity, whereas an intemperate mother, or father and mother, appears to lead to moral deficiency which gives rise to intemperance, or illegitimate offspring or sterility in the daughter. The following table shows that the father is the relative most commonly insane, then the sister and mother:

Father insane	12 cases.
Sister insane	6 "
Mother insane	6 "
Paternal uncle insane	3 "
Paternal aunt insane	3 "
Maternal uncle insane	3 "
Maternal aunt insane	3 "
Paternal cousin insane	3 "
Maternal cousin insane	3 "
Brother insane	2 "
Grandmother insane	2 "

In some of the above more than one relative was affected.

Sex of Child:—It would appear that the production of a male infant exhausts the mother more than a female. Of our 15 women admitted to the asylum pregnant, two recovered and were discharged before confinement. Of the others ten gave birth to boys, three to girls. The previous history of these women shows that they had borne 38 males and 21 females, while the sex of six children could not be ascertained. A probable cause of the difference is found in the greater average weight of boys at the time of birth. We have seen that the insanity of pregnancy is commonest with the fifth child, common from the third to seventh. Also that the average age of the mothers was 33.26 years. Wernich* found that the average weight increased with each pregnancy, and was greatest when the mother was between the thirtieth and thirty-fourth year.

Puerperal cases likewise showed a predominance of male children, but less striking than pregnancy. In lactational women the sex of the offspring was evenly divided.

* "Beitr. zur Geburts." Bd. I, S. 10.

TABLE III.—SEX OF CHILD.

	Pregnancy.	Parturition.	Lactation.
Males	16	32	23
Females	11	27	23
Unascertained or Miscarriage	3	5	..

Other Causes:—Drink is the commonest auxiliary factor, being present in 23 cases (16.5 per cent). Next comes domestic worry in twelve instances, either abuse or neglect on the part of a drunken or ill-doing husband, or the loss of a near relative. Difficult or instrumental labors were reported in four puerperal cases, and two were put down to a too rapid recurrence of pregnancies. Mitral regurgitation, mitral stenosis, and acute rheumatism were present each in two patients; influenza, pleurisy, and exophthalmic goitre in one each. Only one patient had nephritis, an acute remission from old scarlatinal. In all cases the urine was examined on admission, and in nearly all was collected for twenty-four hours before examination, by catheterisation where necessary. Eleven cases showed in greater or less degree the syphilitic taint, but in only three was the evidence in patient, husband, or children unequivocal. The influence of septic absorption and the condition as to marriage will be separately considered later on.

PROGNOSIS.—*Recoveries:*—It is generally agreed that insanity at the puerperal period shows a high recovery rate, and that the form seen during pregnancy is distinctly unfavorable. Of the latter class the present series gives 13 recoveries among 30 cases, a percentage of 43.3. Of the rest 14 became chronic (46.6 per cent.), and three died (10 per cent.), all of whom were general paralytics. If we consider the essential mania of pregnancy as a distinct type, we find among the eight cases that only two recovered (25 per cent.), five became chronic (62.5 per cent.), and one, a general paralytic, died. The determining causes of recovery in the two recovered cases are hard to trace satisfactorily. We have seen that the average age of the eight cases was 33.26 years. Now one of the recovered women was 35, but mental symptoms developed only 37 days before confinement, and six days before admission. The other became insane in the fourth month of pregnancy, but was only twenty-one years old, and had suffered, in addition, shock and exposure incidental to shipwreck on a

stormy night. Regarding the duration of the recovered cases, we note that one became rational and active-minded in five and one-half months, *i. e.*, fourteen days after confinement, the other in two and one-half months, *i. e.*, five weeks after that event. The estimation of the duration of cases is always unsatisfactory, for the personal equation of the observer has a relatively high value, and the boundary line of recovery is marked by no definite sign-post. Then, too, some superintendents send out puerperal cases as soon as possible, holding that relapses are infrequent, others retain them for some weeks after apparent recovery, in order to avoid chance of relapse on exposure to the cares of managing a household, in many cases "gone to pieces" during their confinement in the asylum. Equal difficulties are presented by the mental condition of the patients themselves, some of whom convalesce rapidly, while others take months to throw of the lethargy of brain exhaustion. So it has been decided in this article to consider separately the duration of the acute stages in each case, but to record also the duration of asylum treatment. There is considerable uniformity in the duration of all attacks of insanity connected with reproduction. The thirteen recovered pregnancy cases averaged 6.3 months actual duration, 5.07 months of asylum treatment, showing how long most of them had been insane before admission, and how rapidly convalescence, once begun, progressed.

Of the 64 puerperal cases, 48 recovered, a percentage of 75. This is much the same as the ratio obtained by other observers; insanity is after all not very common, and no one author has experience of a sufficiency of cases to found any reliable statistics upon. The average duration of insanity in the present series was 5.8 months, and of asylum treatment 6.75 months. Further subdivision of these confinement cases is of interest. The average duration of the whole case in those who suffered from early delirium was 4.4 months. Now most of these were placed under treatment within a few days of the onset of symptoms, although the average duration of insanity on admission was 31 days, being much raised by a few cases where prodromal depression had preceded delirium for from one to seven months.

The average duration of the attack in those melancholic all through was nearly double, viz., 8.4 months, and the average duration of disorder on admission 2.1 months. The average duration of those who showed a robust type of mania all through was

5.1 months, and the duration of the disorder on admission only 7.3 days. These results emphasise the benefit of early treatment in an asylum.

Turning to the lactational cases we find 26 recoveries out of 46, a percentage of 56.5. Most observers have had a better result than this; and Dr. Wiglesworth,* from a series of cases whose average age was a year older than that of those presently considered, obtained a recovery rate of 85.7. The average duration of the attack was 5.6 months, almost the same as the puerperal. The duration of asylum treatment was 8.3 months, convalescence being much prolonged, a result to be anticipated where the causal factor was the continued drain of lactation. Subdividing clinically, we find that those who suffered from delirium averaged 5.8 months of symptoms, and 71 days' duration on admission; the melancholic cases averaged 8.7 months' duration, 78 days' existence of attack before admission; the robust maniacal 7.3 months of insanity, 10 days' duration on admission.

It has been mentioned above that 17 cases showed well-marked stupor. Of these 12 recovered, a percentage of 70.5, from which it will be seen that stupor does not, *per se*, affect the favorable prognosis which holds in all the puerperal insanities. The duration of these cases ranged from 6 to 15 months, and averaged 10.8 months. The average duration on admission was 61 days.

We next consider more particularly the results of early asylum treatment:

TABLE IV.—DURATION OF INSANITY ON ADMISSION.

Duration on Admission.	Number of Cases.		Average Length of Attack in Recovered Cases.
	Recovered.	Chronic.	
Under 1 week.....	24	7	4.7 months.
" 1 month.....	30	6	4.9 "
" 2 months.....	13	5	6.3 "
" 3 "	5	2	6.3 "
" 4 "	2	4	9.5 "
" 5 "	4	....	10.5 "
" 6 "	2	2	11 "
" 1 year.....	4	1	18.6 "
Over 1 year.....	0	6	.....

This table shows, shortly speaking, that whereas the average duration of the attack among the recovered in those admitted within one month after the appearance of symptoms was 4.8 months,

* *Liverpool Medico-Chirurgical Journal*, July, 1886.

and in those admitted within four months was 6.3 months; yet in those who had been from four to twelve months insane before admission, the average duration was 13.1 months, and of those affected for more than a year, none recovered. The last two classes embrace those who became affected before the occurrence of the determinating pregnancy, but whose condition did not justify removal from home.

In order to remove the fallacy of the above table, *i. e.*, that the extra length of the attack was occupied by the period previous to admission and that the average length of treatment may have been essentially the same in all cases, we may put the matter in another form:—

TABLE V.—DURATION OF TREATMENT OF THE RECOVERED.

Duration of Insanity on Admission.	Duration of Treatment.				
	Under two Months.	Under four Months.	Under six Months.	Under one Year.	Over one Year.
Under 1 week.....	6	7	6	4	1
" 1 month....	10	9	5	3	3
" 2 months...	1	4	1	5	2
" 4 " ...	1	1	2	1	1
" 6 " ...	..	..	1	2	4
" 1 year.....	..	..	1	2	1
Over 1 year.....	..	..	..	..	..
Totals.....	18	21	16	17	12

The influence of the clinical stages of the attack upon recovery lies rather in the number of stages any case passes through, than in the mere presence of any one clinical form:—

TABLE VI.—DURATION OF STAGES—ALL CASES.

	Delirium.	Primary Mania.	Melancholia.	Stupor.
Minimum of any case.	2 Days.	21 days.	5 days.	2 months.
Maximum " "	60 "	16 months.	4 years.	12 "
Average—Recovered.	21 "	4.6 "	5 months,	5.7 "
" Chronic...	19 "	.....	8 "	7.8 "
" Died.....	15 "	.....	9.1 "	7
Number of cases...	59	57	74	17

These numbers include the stages present before admission, and the duration of such. We see that no melancholic should ever be given up, and all observers have met with cases recovering after a number of years. Primary mania begins to be unfavorable

after a year. The average duration of melancholia and also stupor is shorter among those who recover than among those who become chronic or die. The total number of all stages is 207, which, with 27 cases of late mania which recovered, gives 234 stages for 140 individuals, showing that more than half the cases of puerperal insanity exhibit only one clinical form all through.

The Chronic.—It has been already mentioned that 14 pregnancy, 8 puerperal, and 10 lactational cases became chronic. In estimating the value of these numbers we may recall the average ages on admission:—

	Average Age.	
	Recovered.	Chronic.
Pregnancy	32.8 years.	31.5 years.
Puerperal	28 "	31.2 "
Lactational	31.7 "	30.1 "

Among the puerperal alone, therefore, has the age factor any weight. Of the eight chronic in this class, three were practically so before admission, two others had had previous attacks, and these and one other had insane relatives. The other two were young primiparæ whose first attack had lasted only a few days on admission, and the failure to recover cannot be accounted for. Explanation of the lactational chronic is also unsatisfactory. Two had been previously insane, three had insane relatives (but one was only 23 years old) and two had been intemperate for some years. The other two had been affected for under two months and had not borne children with undue rapidity.

The Deaths.—Up to the present time 21 of our series have died, a percentage of 15. Ten were general paralytics. Of the rest, five were puerperal and six lactational. One of these died eight days after admission from acute delirious mania, another sank from exhaustion and diarrhœa on the tenth day, although food was freely taken. A third died of coma, after two convulsions, on the twenty-first day. A fourth, who had been fed by the nose-tube, succumbed on the fifty-fourth day to septic pneumonia, doubtless due to lodgment of food particles in the lungs. The other seven, having passed through the early delirious stage, became affected with tubercular deposits later on. Five were ordinary phthisis, one acute miliary tubercle, and one general pyæmia and multiple hepatic abscesses.

The earliest fatal result occurred after seven months' residence. Is there any family connection between tubercular diseases and puerperal insanity? Probably not. These seven deaths from tubercle represent 33.3 per cent. of the total deaths among puerperal cases, or 5 per cent. of the puerperal admissions. All had a family history of phthisis, as had twenty-five other puerperal cases, a total percentage of 22.8 of our series showing history of phthisis. Of the total 968 admissions in the years 1889–91, 182 showed a tubercular family taint (18.8 per cent). But in 163 cases no history was obtained, although one was got in every puerperal case. Omitting these, the percentage rises to 22.6 for all cases, almost the same as the other.

Up to the present 201 patients of those admitted in 1889-1891 have died, a percentage of 20.7. Of these 39 have died of tubercular disease, 14.4 per cent. of all deaths, or 4.1 per cent. of the admissions. So that although tubercular families do not appear to suffer specially from puerperal insanity, yet tubercle is prevalent among puerperal cases. The cause is not far to seek. A large number pass through a delirious stage where forcible feeding is resisted. Then follows mental torpor or stupor, with imperfect respiratory and general muscular activity; so that food particles lodging in the lungs give rise to low forms of pneumonia, and tubercle follows. Seven of our eleven fatal cases (omitting general paralytics) had been tube-fed, and three suffered from prolonged stupor. It is worth noting that seven of these eleven were of intemperate habits, and one suffered from severe alcoholic poly-neuritis. In the present series 23 were intemperate, so that a percentage of 30.4 of the intemperate have died of phthisis. Of the 968 admitted from all causes, 271 were chronic tipplers, of whom 14 (5.1 per cent.) have died of tubercle. So that intemperance greatly increases the risk of puerperal insanity. And while upon this subject, it should be mentioned that intemperate puerperal women show a great tendency to sudden relapses after apparent convalescence, and should therefore be retained under continuous supervision for some weeks after they have lost their depression or excitement, nor should they receive the early discharge which it is safe to allow to uncomplicated puerperal cases. The most desperately suicidal patients in an asylum are often those in whom the two factors, alcohol and puerperium or lactation, or all three, have been at work.

Before proceeding to discuss the pathology of the insanities at the reproductive period, there are certain questions which have, from time to time, come under discussion, and upon which any evidence is of value.

Attitude of the Mother Towards the Child.—It will be admitted that an animal who devours her offspring soon after its birth is actuated by some delusion, *i. e.*, is suffering from puerperal insanity, the normal exaggeration of the maternal instinct, which occurs at puerperal periods, being distorted or abolished. And so it is with the human female. A mother may, without regard to the cold dictates of reason or logic, hang weeping over her child, or lavish a foolish amount of affection upon it, while weaving fantastic projects for its future guidance or protection, haunted all the time by some vague and undefined sense of ill. Here we see the first signs of puerperal poisoning. It may be considered strong proof of the depth of the maternal instinct that only 12 per cent. of cases show any direct antagonism to the child, that is 17 cases out of 140. It is, however, quite common for women to include the child in that mist of indifference which surrounds them, when the subjective consciousness has risen to a certain pitch, and this is especially the case with maniacal clinical types, and always occurs in those who have reached the mania of pregnancy, and given birth to the child in the asylum. In nearly all the 17 cases hallucinations were present in addition to the determinating delusions, the most common of which involved the husband's or child's identity, or related to the patient's own viscera, such as "blood turned to water," or "womb pulled out." Only one of the number was unmarried, and, indeed, in the early days after confinement, single girls appear to lavish a somewhat unexpected amount of affection upon their offspring. Only two patients attempted actually to murder their child, in one instance by knocking its head against the wall, in the other by throwing it into water.

The hostile attitude is most commonly developed in the semi-delirium of the early puerperal period (11 cases in the first two weeks), but when caused by a crystallised delusion at a later stage is undoubtedly fraught with greater danger to the child, and probably most cases of insane infanticide occur in late lactation.

Suicidal Propensities.—If it be allowed that all patients suffering from well-marked depression are potentially suicidal, the won-

der is that so few organised attempts occur among puerperal cases. In considering the question, attention must be devoted only to attempts before admission, for in the asylum the patient is too well-watched to give her, so to speak, a fair chance. Seventy-four of the present series passed through a stage of marked depression, of whom 14 (18.9 per cent.) attempted to destroy their own life, and by the following methods: Cut-throat, six; immersion, four; poisoning, two (carbolic acid and paraffin oil); poison (paraffin oil) and cut-throat at separate times, one; suspension, one. One of the cut-throats made two attempts; but, as a rule, the friends take alarm at the first accident, and have the patient certified before another opportunity is afforded. Five attempts were made by four patients before confinement. Two of these were "tired of life," and a third could not overcome the impulse, the fourth being a delusional case. Eight puerperal attempts occurred, all the result of delusional melancholia with auditory hallucinations. The two lactational attempts were similar. Besides these fourteen attempts at suicide, three women attempted to jump through an upper window while delirious, but these cases do not fall within the same category.

The Erotic Element in Puerperal Insanity.—It may be doubted whether sexual excitement assumes a notable prominence in the insanities connected with childbearing. Exact records from an insane population drawn chiefly from the laboring classes are impossible, for foul or indecent remarks show less mental degradation in them than in the insane of the educated classes. But, however this may be, sexual excitement plays an important part in the early puerperal period, especially as such patients are generally women of perfectly reputable life.

Erotism may be observed in five distinct connections:

(1) Mania of Pregnancy, (2) Delirium, (3) Acute Puerperal or Lactational Mania, (4) Melancholia, (5) General Paralysis. The present series exhibited 31 cases, a percentage of 22.1.

In the mania of pregnancy the personality of bystanders is generally mistaken, and women imagine they are talking confidentially to their husband and sister or mother. Indecent overtures, more hinted at guardedly than expressed directly, are made, and attempts at self-exposure. The tendency generally develops after confinement, but sometimes before it. In delirium or acute mania there is much incoherence of the sexual expressions, and veiled sensuousness gives way to loud jokes of a filthy nature and grossly

indecent details of private life. In general paralysis the tendency may appear at any period, but generally in states of excitement. Crystallised delusions of sexual exaggeration, so common in other general paralytics, are not more prominent here. In melancholia it is decidedly rare, and partakes of the characters so commonly observed in climacteric insanities, feelings altogether unpleasant and abhorrent to the patient, which she complains of as being alike uncontrollable and sinful.

It is with recent confinement that erotism is so largely associated. It occurred in eighteen instances out of the total of thirty-one within six weeks of delivery, a percentage of 58. We may safely assume direct uterine irritation to be responsible, but the phenomenon is purely cerebral, for probably orgasms are never present, and bimanual examination calls forth no remark from the patient, unless there be septic absorption, when pain is complained of, nor does the woman pay any attention to the proceeding or change the current of her thoughts thereat.

In late lactational cases erotic expressions are most apt to occur in connection with acute mania, and often take the form of confidential expressions about the patient's own or some one's else generative powers or organs, in no way intended to be offensive; exaggerated ideas of the maternal powers are common.

TABLE VII.—PROMINENCE OF THE SEXUAL ELEMENT.

CLINICAL TYPES.	PREGNANCY.		PUERPERAL.	LACTATIONAL.
	Before Confinement.	After Confinement.		
Mania of Pregnancy..	1	3	..	..
Delirium.....	..	1	7	2
Acute Mania.....	..	..	6	4
Melancholia.....	..	..	1	2
General Paralysis....	1	1	..	2
Total.....	2	5	14	10

The Influence of the Unmarried State upon the Production of Insanity. Probably no question in connection with the insanities of childbearing has excited more controversy than the value of the moral factor in its ætiolgy. It is almost universally conceded that the shame of exposure and the worry incident to an illegitimate pregnancy are the causes of the attack. And yet the present writer is totally unable to sustain this contention. It is a question naturally difficult to argue, but the

truth may be arrived at by careful cross-examination of each admission as to the sexual history, and with the assistance of the registration returns.

Of the 140 births comprised in the present series of cases, ten occurred in single women, a percentage of 7.1 or ratio of 1:13. These are composed thus:

TABLE VIII.

	Single.	Married.	Percentage of Single.	Ratio.
Pregnancy.....	5	25	20.	1:15
Puerperal.....	5	59	8.4	1:11.8
Lactational	..	46	..	..

The high ratio among pregnancy cases is the more notable when it is remembered that the average age of all pregnancy insane is 31.7 and most are multiparæ, whereas unmarried women who become pregnant are mostly under thirty and primiparous. Of these five cases one girl was a general paralytic and three more had led a loose life, of whom two had previously borne a child. The fifth displayed in the family history a strong direct heredity, and her grandmother is an inmate of the asylum at present. In her the moral factor was certainly present, but so was the fact that she was shipwrecked while pregnant, was two hours in the water before being rescued, and was six weeks in hospital suffering from shock and physical weakness. She alone, of the five cases, ultimately recovered. Of the five puerperal cases, one had previously had four miscarriages, and was syphilitic. She was really a widow, but had scarcely lived with her husband at all, and I have classed her among the single. Another had two children already, the third had been previously in an asylum, the fourth was a general paralytic, and the fifth intemperate. So that of our ten cases, seven had led a loose life, and two were general paralytics. Is it at all probable that the moral factor was of paramount importance in any of these? No cases of lactational insanity occurred in single women, probably because illegitimate children are so rarely suckled by the mother. The next point is to show that illegitimacy is just as common among all classes of asylum admissions as among puerperal. We therefore note the results given by our routine practice of examining every woman on admission for signs of parity. The condition of the mammæ and abdomen are in most cases sufficiently unequivocal.

In a few doubtful cases the state of the os uteri was ascertained before the patient was questioned.

In every case the patient or her friends freely admitted the maternity. Of our 968 cases, 363 were single, 605 married or widows. Of the former, 23 had borne one child, four had borne two, and one four; yet of the 28 only one had suffered from a previous attack of insanity. Of the 605 married and widowed, 16 confessed to one illegitimate child and one to two. Of course incoherent or unsupported statements were guarded against. None of these seventeen had been in an asylum previously, and yet seven of them now occurred as puerperal admissions after marriage.

Adding the married women who had borne illegitimate children to the single, we get the following result:

TABLE IX.—PROPORTION OF ILLEGITIMATE BIRTHS AMONG INSANE.

	Illegitimate.	Legitimate.	Percentage.	Ratio.
All Admissions.....	45	588	7.6	1:12
Puerperal "	10	130	7.1	1:13

If these figures show anything at all, they show that puerperal admissions, if anything, lower the proportion of illegitimate births among those of insane proclivities. Another point in evidence is this; that of the 28 parous single girls among the total admissions, only seven recovered, while in the etiology of the other 19, syphilis, general paralysis, or alcoholism was present. The family history of women of loose life is rarely satisfactory, so I make no attempt to give statistics of heredity.

During the years 1889–91, the illegitimate births among the population supplying Rainhill Asylum were 3,310, and the births in wedlock 94,755,* a percentage of 3.49 and ratio of 1:28.6.

TABLE X.—LEGITIMATE AND ILLEGITIMATE BIRTH RATES.

	Illegitimate.	Legitimate.	Percentage.	Ratio.
Whole Population...	3,310	94,755	3.4	1:28
Asylum Admissions..	45	588	7.6	1:12

That is, the illegitimate birth rate among individuals who afterwards become insane is more than double that of the population at large.

* These figures have been obtained from the various Superintendent Registrars.

If the "moral factor" have no influence on the production of puerperal insanity, what is the bond of union between insanity and illegitimacy? I take it that in the neurotic individual there is less self-control. Sexual indulgence is more easily given way to when temptation offers, and also such girls put themselves in the way of temptation by their unsettled temperament, and objection to the dull routine of home life. We all recognise how few prostitutes have the least desire to be reclaimed, and how many are potentially immoral from birth. Also in those women whom, though not insane, we know to have given way to sexual indulgence, we note the predominance of the neurotic taint, the tendency to emotional outbursts, the melancholic temperament, the suspicious reserve, the volatility of mood, the general hysterical manifestations, or the actual family history of insanity. We know how easily illegitimate girls give way to temptation, and I have seen a case in the asylum, herself illegitimate, who had an illegitimate child, and whose illegitimate sister had an illegitimate child, and whose mother was also illegitimate.

General Paralysis and Puerperal Insanity.—Whether general paralysis may exist for years before physical or decided mental signs appear, is too wide a point for discussion here, but those who hold this contention will be right in alleging that the connection between it and puerperal insanity is accidental. But to me it appears unlikely that a certain type of general paralysis, which follows, generally, a long lactation, should *never* show physical signs in the two years, it may be, that pass from the patient's admission till the manifest development of diagnostic symptoms. It seems far more likely that while in some cases general paralysis was in existence first, yet in others, that the exhaustion from lactation was one of the exciting causes. Broadly speaking, we may differentiate each class of cases by the clinical course. Pregnancy and confinement in a general paralytic hurry the downward course by the presence of acute excitement, and the duration is short; sequent general paralysis, on the other hand shows a long and gradual degeneration, the physical signs being generally in advance of the mental.

Our series contains ten cases, (7.1 per cent.) Three of them illustrate the first class. (1). A woman aged thirty-one, married sixteen years, with six children and no miscarriages or other trace of syphilis, became a general paralytic and also pregnant. At the fifth month acute mania appeared, and she aborted soon after.

She reached the third stage in six months. Then a remission of over two years occurred, the whole course of the case being three years. (2). A syphilitic widow who had several illegitimate pregnancies. (3). A young girl who took to sexual indulgence when her self-control was weakened by the brain degeneration. She died within ten months after confinement, having been maniacal all the time. Two cases are hard to classify:—(4). A barmaid aged eighteen, in whom signs of paralysis occurred after confinement two years before admission; excitement extreme; died a few days after admission. (5). A married woman, syphilitic, who had eight dead children in nine years; acute mania continued to the end. The other five cases revealed signs of paralysis not less than 18 months after admission, and followed the slowly progressive type without excitement. The lactational mania from which four cases sprang was prolonged, as also was the causal lactation. The fifth was admitted pregnant. It is to be particularly noted that in the last five cases, evidence against syphilis was about as strong as any negative evidence ever can be. Nor were any of the other known causes of paralysis found.

Labor in the Insane.—This is generally precipitate. The first stage is apt to be overlooked, both because the patient suffers from mania of pregnancy, and will not acknowledge being in labor, and because there is, without any doubt whatever, an undue relaxation of the soft tissues. In our series of 15 confinements after admission, one was a primipara. She was not discovered to be in labor till an hour before delivery, and the whole fœtus was expelled in one pain within twenty minutes after rupture of the membranes. This rapidity of delivery is rendered more remarkable by the fact that uterine action in the insane tends to be weak, and the assistance of the diaphragm and abdominal muscles rarely obtained. Yet post-partum hæmorrhage does not seem to occur. In one of our cases delivery was accomplished in a single pain. The woman was examined on admission, and labor had not commenced. After her bath there was no "show." A few minutes later she leaped out of bed with a cry, the membranes ruptured, and the child, born on the spot, fell to the ground. Delivery after two or three pains is comparatively common. In 14 of our series the presentation was cephalic, but in several cases precipitate labor precluded exact differentiation. There was only one caput suc-

cedaneum, the primipara. One presentation was L. S. A. and delivery was spontaneous and easy.

PATHOLOGY: In discussing the morbid anatomy of puerperal insanity, it is necessary clearly to distinguish between the primary brain affection and the sequelæ which secondary mania or dementia are connected with, and which may as readily occur in any other form of insanity. Now most puerperal and lactational cases recover, and the rest become chronic, or die of wasting diseases, mostly tuberculosis, which are responsible for various post mortem conditions in no way connected with the original disorder. Nearly all the cases of death in our series were examined, and fresh sections of the cortex made:—They showed all sorts and conditions of change, pigmentary degeneration, granularity, vacuolation or atrophy of cells, loss of processes, dilatation and blocking of lymph spaces, thickening of vessels, coarseness of neuroglia, wasting of gyri, or thickening and opacity of membranes, an examination of all which conditions avails us little in the present discussion. It is necessary to make an attempt to understand the possible conditions under which puerperal insanity may occur.

In pregnancy the functions of the uterus and surrounding organs are strained to the utmost and the anatomical and physiological environments profoundly altered. For one thing there is a considerable excretion of waste products from the fœtus, and absorption of breaking down soluble organic nitrogen through the placental circulation and liquor amnii. Given the unstable or neurotic predisposition, it is not unlikely that the maternal excretion is overtaxed and that poisons are retained in the blood. The phenomena of the mania of pregnancy are those of a slightly toxæmic influence exerted over a long period, causing the comparatively fixed delusions with little excitement. A large proportion do not recover: we know that the time factor in a poison is almost more important than initial virulence. Cell changes are produced in the cortex of a nature which precludes resolution. It cannot be that the want of muscular tone in the uterus is without significance in the pathology, though what the import is is by no means apparent. It certainly suggests a general state of blood poisoning.

We now turn to puerperal conditions. Delivery leaves the uterine lymphatics choked with albuminous fluids whose vitality is low, and which, even if they be not actually toxic, are waste products whose absorption into the blood stream and immediate excretion from the

system are imperatively demanded. And when lactation has been in progress for sometime, the drain of albumen may cause profound alterations in the body chemistry. Now owing to the accommodation which is possible within physiological limits, no harm in most cases results, but if excretion be in any way interfered with, mental symptoms may, in certain predisposed neurotic individuals, develop. If we allow that these are the results of disordered cortical cell chemical changes, we must seek a connection between the generative organs and the cortex. This has been by custom described as a nerve fibre connection, and a "reflex disturbance" has been hitherto alleged to be the cause. Now most writers allow that some puerperal cases are due to septic, that is, bacterial products being absorbed into the circulation. It is strange that no one has ventured to the broader assertion that *all* puerperal cases are caused by intoxication, not necessarily by albumens produced by bacterial growth, but by those toxæmic organic compounds of nitrogen allied to, but more complicated than uric acid and urea. To take a further step, there are many facts which lead us to believe that all forms of delirium are so produced. Now septic puerperal cases are plainly enough explainable in this light. But there are many cases where the lochia, although acid, are not putrid, and the axillary temperature normal, yet where the vaginal temperature is 99.5° or 100°. Are these septic or not, or, if not, where is the dividing line? Then 101° is by no means an uncommon temperature for a case of lactational delirium. Is this a "reflex disturbance?" The reflex disturbance theory ill explains cases where delirium arises in the third or fourth week after confinement. Delirium before confinement is very rare, except in association with albuminuria, *i. e.*, when excretion is imperfect. No purely chemical explanation will account for the long continuance of alcoholic delirium, or in that form seen in poisoning by metals which form such insoluble albuminates as lead, mercury or silver. It is granted by all that in uræmia and diabetes these endogenous organic toxines are circulating in the blood, and may cause, among other phenomena, delirium. We have positive evidence that in delirium the excretions are disordered, in the furred tongue, sordes, gastric catarrh, constipation, and scanty uratic urine. In puerperal cases we invariably see cessation of the lochia with aggravation of mental signs, and their return with alleviation; we invariably find delayed involution in the

insane, and notice also the waxy pallor, the sallow skin, the quick production of anæmia and wasting, and the great destruction of hæmoglobin when the blood is examined, all pointing to a blood condition, not a cerebro-cortical. The universal benefit derived from a purge, which after all only acts by stimulating excretion, the recognised objection to such drugs as opium, which paralyse osmosis, and the advantages derived from douches and counter-irritation of the uterus, show that most asylum physicians act up to the toxæmic theory, whether they admit it or not. The experiments of injecting urea and carbonate of ammonia into the circulation of dogs, and no ill-effect occurring while excretion was free, now become intelligible, as also the observed toxicity of normal urine when injected into mice. It is true we cannot lay our finger on the series of albumens supposed to be at work, but recent researches into the chemistry and micro-chemistry of toxines, make it likely that further advance will soon be made. The strongest evidence of our contention *was one case of this series*,* who died of coma and convulsions, and where neither lead nor nephritis, nor any other recognised cause was in operation.

Poisonous excrementitious products, circulating in the blood, cause, in certain individuals whose power of compensation is low, changes in the chemical constitution of the cells, so that nerve energy is disordered in various directions, and the types of insane states result. Observed results of post-mortems in recent cases show evidence of slight inflammatory processes, whether mania, melancholia, or delirium was present, and, as far as we can observe clinically, vasomotor dilatation and cortical congestion exist. It is conceivable and likely that stronger irritants are required to produce acute mania and delirium, than suffice for melancholia or delusional states. Still stronger stimulation may cause convulsions; then follow the phenomena of nerve cell exhaustion, pure depression in coma, structural change in stupor. If the products of inflammation have been numerous, absorption cannot completely occur, and chronicity results. We know how much oftener this happens when excitement has been long and intense. And also in stupor, where there has been much venous congestion and œdema of the cortex, reabsorption may be incomplete, and dementia result. The above pathology, more reasonably than any other at present advanced, explains the course of puerperal cases,

* *Lancet*, November 26, 1892.

the early prodromata, the melancholia, delirium, mania, stupor and slow recovery.

Two cases of acute delirious mania in the present series proved fatal, but only one post mortem was obtained. The patient failed to suckle her child for more than five months. Just as the milk was disappearing she was called from home to nurse her mother. Nine days later she became excited, and the next day delirious. Five days later she was admitted in a delirious state, with great prostration, and died from exhaustion and diarrhœa eight days later. Thus the whole illness lasted thirteen days, or, from the time the causes were in action, twenty-two days. At the post-mortem, the brain showed some patchy pink congestion of surface, as well as on section, and the vessels were somewhat overfull. Fresh sections: "In the second frontal of both sides vacuolation of cells of second layer, the condition irregularly distributed. This condition was observed occasionally elsewhere, viz.: In second parietal, insula, and less frequently in other parts. Where the condition was well marked the third layer also showed vacuolation. In the ganglion cell layer the cells were swollen and their outlines blurred; with granularity of protoplasm best marked near the apical process. The spindle-cell layer showed like conditions. The perivascular sheaths were filled with nuclei and the vessels distended. Punctiform hæmorrhages were visible at places." The pathology of acute delirious mania is not obvious, but it appears to be a phenomenon of excessive stimulation with absence of resting intervals, resulting in functional death with structural change. It is probably a secondary condition which may arise in any acute brain state, but chiefly in the presence of uncompensated excitement. We always notice clinically the absence of the two factors necessary for cell recuperation, food and sleep. The rapid wasting, with degeneration of cord and peripheral nerves, is evidence of a widely circulating blood poison.

Regarding the pathology of stupor it is not probable that either the vascular or nerve cell theory can stand alone. The causes of the cell exhaustion may be found in the blood, but the results will be diminution of the arterial calibre all the same (though why thought to be "congenital?"), with venous congestion, stasis, and œdema. Associated with stupor is resistiveness. There are reasons for supposing that undue chemical nerve cell stability will account for this phenomenon. In evidence of this we note the

effect of stimulation, either vascular, hot and cold water to head and spine, (Robertson) or baths at 125°—or else reflex, the faradic or galvanic current, in alleviating, for the time being, first resistiveness, then stupor. The phenomena of natural recovery are similar.

Treatment.—There is nothing to be said about the treatment of puerperal insanity which is not already known to all asylum physicians, and a few points only need here be noticed.

Patients admitted from large city unions are apt to come to the asylum under the charge of a relieving officer and a woman, perhaps his wife, neither of whom knows even the name of the patient, while the cause of insanity in the "statement of particulars," is judiciously filled up as "not known." Accordingly an exact diagnosis must be made at once between (1) puerperal, (2) early lactation, (3) late lactation, (4) enteric fever.

The considerations for treatment are general and local.

I.—*General.*—(1) A hot bath should be given unless there is severe pneumonia, and the right heart is likely to be overdistended thereby. In the large majority of cases the bath must do more good than harm, by removing the dirt and secretions which have been, perhaps for weeks, clogging the skin.

(2) If food be freely partaken of, difficulties vanish, and a purge may at once be given. But most cases will refuse. In this case a saline aperient in full dose should be given through a small nose tube (Jacques No. 12 red rubber is convenient), and the rectum, if loaded, may be cleared by a simple or glycerine enema. Generally the bowels are relieved in a few hours and the patient takes food. If forcible feeding be necessary (No. 18 black rubber nose tube or No. 27 œsophageal are useful sizes), peptones and brandy, or Benger's food and milk should be given at first, and in small quantities frequently, especially if there be a tendency towards the acute delirious type. A few cases require feeding for more than a day or two, and these soon learn to tolerate as much as three pints twice daily of milk, eggs and soup. This quantity saves the exhausting struggle of frequent feeding, and the presence of healthy formed motions is a proof of absorption. If diarrhœa be present small quantities frequently are necessary, and chiefly peptonised milk and flour, and very small doses of morphine and belladonna may be given; but diarrhœa in delirium is most unfavorable, in-

dicating grave auto-intoxication. If it continue beyond a few days, the case rarely recovers. When feeding with large quantities of food, ten or twenty grs. of rhubarb and a like quantity of bi-carbonate of soda may be given each time with excellent effect.

(3) *Intestinal antiseptics.* One would not expect much good from antiseptic agents unless these be absorbed along the mucous tract where the cause lies, and this is certainly not the case in puerperal insanities. In fact for stimulating excretion they are about the worst things possible, for most of them cause intestinal catarrh. They have had no benefit in delirium or acute mania. Naphthalin is better than Bnaphthol or salol. Carbolic acid must be given in pill form coated with keratine. Ol. menth. pip. quickly paralyses the sensory nerves of the stomach and fauces, and stops digestion. Calomel is excellent, but probably its antiseptic use is unimportant. Creolin seems to offer advantages, not being poisonous; but it is difficult to make palatable. Creosotal is the best of all intestinal antiseptics within our reach at present. It is tasteless and non-irritating, and may be given pure in doses of ʒ ss to ʒ i thrice daily.

(4) *Sedatives.*—The greater number of puerperal cases require no hypnotic drugs. If food, especially when given hot at bedtime in considerable quantity, does not produce sleep, then outdoor exercise and a hot bath may be added, or generally hot porter, or other form of alcohol. Stout with whiskey (two ounces to the pint) is excellent. As a sedative, alcohol should be given in one large dose, as an antipyretic, in minute quantities frequently, freely diluted. If a sedative drug is necessary, pure chloral is certainly the best, or in robust cases sulphonal, but this latter is strongly contraindicated in some exhausted conditions. Bromide is harmless, but useless, opium and hyoscine strongly contraindicated. Where the excitement is mild, paraldehyde is better than ethylic alcohol. Sedatives are very apt to increase the hallucinations in delirium, and rarely shorten the excitement. There are always some cases which nothing seems to benefit.

(5) *Antipyretics.*—In delirious cases the vaginal temperature should always be taken. It is so much more reliable than the axillary, especially in thin subjects, and fewer thermometers are

broken. Few cases of recent confinement have a vaginal temperature of under 99.5° F. when delirious, while in patients confined in the asylum, the reading seems to be normally about 98.8° F. In some severe cases where the axillary reading is only 102° F., it may be as much as 104° F. in the vagina. The local injury of confinement far overshadows any psychic irritation produced by the presence of a thermometer bulb in the vagina. In general septic fever two drugs are of great use, and may be pressed strongly. These are digitalis and quinine. But both are apt to disappoint sometimes. Direct cold is as good an antipyretic as any, either in the form of cold baths, or wet pack, or head and vaginal ice bags. I have one recovery which lay for some days in a wet sheet and gradually improved, after other means had failed. But direct cold will not bring down the temperature in some cases, the extremities grow blue, and the blood is driven into the abdominal veins. If alcohol be given internally, from six to ten ounces or more of brandy are required daily. It should be given freely diluted, and in teaspoonfuls every ten minutes. Being easily oxidised it saves tissue metabolism. Thus alcohol in puerperal insanity has three distinct uses, (1) an antipyretic, (2) a hypnotic, (3) a tonic during convalescence. These uses must be kept separately in mind, and the doses regulated accordingly.

Rest in bed should be maintained for at least a fortnight, after which, if the temperature be normal, a free, outdoor life, with plenty of light food and milk, tend to bring about rapid physical convalescence. Iron may be used with advantage in many cases, and should be given as a ferrous salt.

II.—*Local.*—If fluids absorbed from the uterine surface in puerperal cases, and from the mammæ in lactational, are the active agents in producing puerperal insanity, it becomes important to get rid of these sources of irritation as soon as possible.

(1). The lochia nearly always cease when the temperature rises much, and the vagina becomes hot and dry. In septic states curetting may be advisable, but I have no experience of copious pus formation in the uterus. But even if there be little or no rise of temperature, hot douches should be used as long as the lochia remain. The water should be at 110° F., and this acts as an excellent counterirritant. The lochia generally reappear in a few hours and the toxæmic agents are removed without absorption. Antisep-

tics may be added, although their efficacy is doubtful. Iodine is the best, but perchloride or peppermint is good. Carbolic is very irritating if strong enough to be of service. Three douches a day are required, at first, but in the second week one is enough.

(2). When the mammæ are distended the formationof milk may be stopped in various ways. Drawing off a small quantity is better than emptying the breast. Belladonna should not be given internally. A much better local action is secured by smearing the breasts with equal parts of glycerine and fresh extract. Strapping, hot fomentations, and sling supports secure rest to the part. If the milk do not disappear in three or four days, care must be taken against abscess formation, which is sometimes very insidious, with no local redness at all. The cause is generally that one of the lobes of the mammæ inflames slightly and the ducts are no longer patent. Nurses should be warned that each lobe requires separate attention. The infero-external lobe of the left breast generally suffers. Accordingly, of late, I have incised the refractory lobe emptied it of milk, dressed antiseptically, and put on pressure.

It will heal by first intention and remain empty. Very few ducts can possibly be cut, and one cannot tell afterwards from the appearance of the breast that any incision has been made. The mental effect is often as marked as it is after opening a mammary abscess; the delirium may subside in a day. It is worth noting that mammary abscesses in puerperal cases are nearly always found septic when incised.

LIST OF CASES.

Number.	Name.	Age.	Social State.	Number of Pregnancy	Number of Attack.	Sex of Child.	Date of Attack.	Result.
							Before Labor.	
1	M. B.	33	Married.	7	1	Male.	18 Months.	Chronic'y.
2	S. W.	33	"	6	1	Female.	12 "	..
3	F. M. H.	28	"	4	2	"	7 "	Chronic'y.
4	M. J. D.	38	"	3	1	Male.	5 "	"
5	N. McG.	35	"	5	1	..	5 "	Recovery.
6	G. N. W.	21	Single.	1	1	Male.	5 "	"
7	M. C.	31	Married.	7	1	"	4 "	(G. P.)
8	M. M.	35	"	4	1	..	4 "	Recovery.
9	A. F.	39	"	5	4	Male.	2½ "	"
10	E. R.	28	"	3	2	"	2 "	Chronic'y.
11	M. A. H.	38	Single.	2	1	"	2 "	"
12	B. S.	34	Married.	6	1	"	2 "	"
13	M. G.	35	"	7	2	Female.	37 Days.	Recovery.
14	A. E.	41	"	3	2	Male.	.....	Chronic'y.
15	K. Q.	30	Single.	2	1	"	.....	"
16	J. H.	36	Married.	7	3	Female.	5 Months.	"
17	A. A.	35	"	4	1	"	5 "	Recovery.
18	J. K.	34	"	5	1	"	4½ "	"
19	E. A. L.	21	Single.	1	1	"	4½ "	(G. P.)
20	A. B.	24	Married.	2	1	Male.	3 "	Chronic'y.
21	M. K.	38	"	8	2	Female.	3 "	Recovery.
22	A. L.	38	"	1	1	Male.	3 "	"
23	E. E. L.	20	Single.	1	1	"	2 "	Chronic'y.
24	A. J. D.	30	Married.	4	1	"	2 "	"
25	M. McM.	41	"	11	3	Female.	2 "	Recovery.
26	S. D.	27	"	1	1	Male.	1½ "	"
27	M. F.	31	"	11	1	"	1 "	Chronic'y.
28	A. M. P.	22	"	2	1	Female.	1 "	Recover'd.
29	S. S.	31	"	6	1	Miscarriage.	1 "	Chronic'y.
30	M. L.	27	"	3	1	Female.	4 Days.	Recover'd.
31	M. G.	28	"	5	1	Male.	Same day.	"
32	M. S.	30	"	3	2	Female.	" "	"
33	J. E. P.	40	"	12	1	Male.	" "	Death.
34	M. T.	26	"	3	2	Female.	" "	Chronic'y.
35	A. P.	35	"	12	12	Miscarriage.	Day after labor.	Recover'd.
							After Labor.	
36	M. P.	26	"	1	1	Female.	3 Days.	Recovery.
37	C. S.	29	"	6	1	Male.	3 "	"
38	A. J.	28	Widow.	5	1	Miscarriage.	3 "	Death.
39	G. E. W.	32	Married.	1	1	Male.	4 "	Recovery.
40	E. R.	27	"	2	1	"	4 "	"
41	C. McE.	24	Single.	1	1	"	5 "	"
42	S. E. R.	27	Married.	1	1	"	6 "	"
43	A. D.	26	"	4	1	Female.	7 "	"
44	M. D.	36	"	9	1	Male.	7 "	"
45	I. A.	29	Single.	1	2	"	7 "	"
46	M. R.	35	Married.	7	1	Female.	7 "	"
47	A. G.	26	"	1	1	"	7 "	Chronic'y.
48	E. J. H.	22	"	1	1	"	7 "	Recovery.
49	I. B.	22	"	1	1	Male.	7 "	"
50	L. B.	23	"	2	1	Female.	7 "	"
51	M. E. W.	19	"	1	1	"	8 "	"

LIST OF CASES—(Continued).

Number.	Name.	Age.	Social State.	Number of Pregnancy	Number of Attack.	Sex of Child.	Date of Attack.	Result.
							After Labor.	
52	E. H.	23	Married.	2	1	Female.	8 Days.	Recovery.
53	A. C.	20	"	1	1	Male.	9 "	"
54	E. W.	22	"	3	1	"	9 "	"
55	M. E. T.	23	"	1	1	"	9 "	"
56	A. S.	26	"	5	1	"	10 "	"
57	M. A. B.	23	"	4	1	"	11 "	Death.
58	A. R.	31	"	4	1	Female.	11 "	Recovery.
59	E. B.	28	"	7	1	"	14 "	Chronic'y.
60	M. H.	33	"	8	4	Male.	14 "	Recovery
61	F. P.	24	"	3	1	"	14 "	"
62	M. W.	36	"	10	2	"	14 "	"
63	E. S.	29	"	9	1	Miscarriage.	14 "	"
64	L. V.	40	"	10	1	Male.	14 "	"
65	S. J. W.	24	"	1	1	Female.	14 "	"
66	E. G.	35	"	7	3	Miscarriage.	14 "	"
67	A. P.	22	"	1	1	Female.	14 "	"
68	A. D.	23	"	2	1	"	15 "	"
69	E. S.	35	"	8	2	Male.	18 "	"
70	F. C.	31	"	5	1	Female.	1 Month.	"
71	M. H.	24	"	1	1	Male.	1 "	"
72	M. E. W.	35	"	9	1	"	1 "	Death.
73	R. W.	24	"	2	1	Male.	1 "	Recovery.
74	A. G.	22	Single.	3	1	Female.	1 "	"
75	A. M.	37	Married.	7	4	Male.	1½ "	"
76	M. H.	35	"	2	1	"	1½ "	Chronic'y.
77	E. G.	23	"	4	1	"	1½ "	Recovery.
78	C. S.	42	"	10	1	"	1½ "	"
79	H. W.	28	"	5	1	Female.	1½ "	"
80	B. G.	36	"	6	2	Male.	1½ "	Death.
81	M. W.	26	"	3	1	Female	1½ "	Recovery.
82	D. K.	31	"	5	1	Male.	1¾ "	Death.
83	F. M.	34	"	6	1	Female.	1¾ "	Recovery.
84	A. P.	24	"	2	1	"	2 "	"
85	A. S.	20	Single.	1	1	"	2 "	(G. P.)
86	L. H.	37	Married.	8	3	Male.	2 "	Chronic'y.
87	F. W.	31	"	3	3	Female.	....	Recovery.
88	J. N.	28	"	1	1	Male.	....	Chronic'y.
89	E. N.	26	"	4	1	"	2 Months.	"
90	N. A.	39	"	11	1	Female.	2 "	"
91	M. C.	29	"	8	1	"	....	(G. P.)
92	J. K.	38	"	5	1	Male.	2 Months.	Recovery.
93	A. P.	27	"	3	2	Female.	2 "	"
94	E. W.	33	"	..	..	..	2 "	"
95	S. A. F.	41	"	6	2	Male.	2½ "	"
96	B. L.	26	"	3	1	Female.	2½ "	Chronic'y.
97	E. J.	28	"	7	1	Male.	2¾ "	Recovery.
98	C. S.	31	"	2	2	Female.	2¾ "	"
99	E. H.	31	"	5	1	Male.	3 "	"
100	S. J. B.	23	"	5	1	"	3¼ "	Chronic'y.
101	M. T.	25	"	2	1	Female.	3½ "	.....
102	E. H.	35	"	6	1	Male.	4 "	Recovery.
103	E. McA.	24	"	4	1	"	4 "	.....

LIST OF CASES—(Continued).

Number.	Name.	Age.	Social State.	Number of Pregnancy	Number of Attack.	Sex of Child.	Date of Attack.	Result.
							After Labor.	
104	C. D.	30	Married.	3	1	Male.	4 Months.	Death.
105	A. J. N.	31	"	7	4	Female.	4¾ "	Chronic'y.
106	W. S.	35	"	4	1	"	4¾ "	Death.
107	I. B.	30	"	2	2	"	5 "	Recovery.
108	S. G.	37	"	11	2	"	5 "	"
109	F. M.	32	"	6	2	Male.	6 "	"
110	E. P.	31	"	5	1	"	6 "	Chronic'y.
111	S. J. H.	26	"	3	1	"	6 "	Recovery.
112	E. J. J.	28	"	3	1	Female.	6 "	Chronic'y.
113	M. E.	33	"	7	1	Male.	6 "	(G. P.)
114	B. R.	35	"	9	2	"	6¾ "	Recovery.
115	E. K.	31	"	5	1	Female.	7 "	Chronic'y.
116	E. T.	31	"	4	1	Male.	7 "	.....
117	A. H.	36	"	7	4	Female.	8 "	Chronic'y.
118	E. D.	27	"	5	1	Male.	8½ "	Recovery.
119	E. L.	32	"	4	1	Female.	9⅛ "	"
120	E. M.	41	"	5	1	Male.	9½ "	"
121	E. J. P.	28	"	4	1	Female.	9½ "	"
122	M. McG.	28	"	3	1	Male.	10 "	Death.
123	M. G.	35	"	5	1	"	10 "	Chronic'y.
124	M. O.	32	"	6	1	Female.	10 "	Recovery.
125	F. G.	31	"	8	2	"	10 "	Chronic'y.
126	S. R.	34	"	5	1	Male.	11 "	Death.
127	F. T.	32	"	10	2	"	11½ "	Recovery.
128	S. R.	20	"	2	2	Female.	11½ "	"
129	M. M.	23	"	4	1	"	11¾ "	Chronic'y.
130	M. L.	34	"	6	1	Male.	12 "	Death.
131	S. E. O.	27	"	3	1	Female.	12 "	Recovery.
132	A. McG.	34	"	7	3	"	13 "	"
133	E. H.	34	"	3	1	"	13½ "	"
134	M. A. T.	35	"	6	1	Male.	15 "	Chronic'y.
135	C. S.	23	"	5	1	Female.	15 "	Recovery.
136	J. H.	36	"	5	1	"	15 "	"
137	L. H. L.	32	"	1	1	Male.	20 "	(G. P.)
138	A. A.	32	"	9	2	"	21 "	Recovery.
139	E. T.	33	"	5	1	Female.	21 "	Death.
140	J. M.	38	"	6	1	"	29 "	Recovery.

THE LUNACY ADMINISTRATION OF SCOTLAND 1857—1892.*

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Before the year 1857 the insane in Scotland were supervised and legally protected by the sheriffs of each county, who visited the asylums within their jurisdiction and attended to all complaints of undue detention or improper treatment. The sheriff in Scotland is a local judge with large powers, and he is always a trained lawyer and has a life tenure of office. At various times within the previous eighty-five years there had been erected in Scotland seven asylums, all with royal charters, hence called "Royal Asylums," but all originating in local philanthropic efforts, and in no way subject to royal control or receiving government assistance. They were all situated near the larger towns of the kingdom and were all governed by local boards of management, who appointed the officers, visited the institutions and saw the patients. No local rates or assessments were or could be raised for their erection, but they all, after completion, took in a certain proportion of rate-paid or "pauper" patients paid for by their parishes, as well as "private" patients who were paid for by their relatives or out of their own means. In addition to these royal asylums there were many privately owned asylums where both pauper and private patients were boarded. The poorhouses also had some insane and imbecile inmates of the more quiet sort, and scattered through many of the poorer and more outlying portions of the country were a large number of insane persons boarded with private families; oftentimes very small sums of money indeed being paid for their maintenance, and no supervision being exercised over them at all. There was no central authority in the kingdom whose duty it was to exercise a general supervision over the insane or their guardians.

After the passing of the English Lunacy Act of 1845, under Lord Shaftesbury's philanthropic initiative, more than one attempt was made to pass a similar act for Scotland, especially in 1848, but without success till 1857.

*Read at the International Congress of Charities, Correction and Philanthropy, (Sect. IV; on the Commitment, Detention, Care and Treatment of the Insane), Chicago, Ill., June 12-18, 1893.

In 1855, Miss Dix, who had in America done much for the insane, came to Scotland and by her exposure of the cruel neglect of the pauper insane in some of the smaller private asylums, roused the government of the day to appoint a royal commission of enquiry into the treatment of the insane and the state of the law. This commission had the advantage of having Mr. Gaskell and Mr. Campbell, two of the permanent English Commissioners in Lunacy on its staff, and also of having Dr. James Coxe as its most active local member, who, it is understood, drew up its report. It issued an admirable and exhaustive report early in 1857 showing the urgent need of legislation to remedy abuses, to erect public asylums, and to provide a central authority for the regulation and supervision of the insane of all classes.

The present lunacy act for Scotland was at once passed in 1857. A few short amending acts have since been passed supplementary to the provisions of that act, but not making any essential change in its principles. The act made provision in the first place for the appointment of a "General Board of Commissioners in Lunacy for Scotland" for the general supervision of the insane in that kingdom, to see that asylums were provided by the local authorities and out of the local rates where none previously existed, and generally to see that the provisions of the statute were executed; but not to administer the asylums themselves, or to act as an executive body in anything relating to the insane. The sheriffs and medical men were left to send the insane to asylums; the local authorities were to form themselves into "District Boards" to build and to govern the new asylums to be erected under the act. The parish authorities and the local inspectors of poor were to take the initial steps as to the sending of patients to asylums who needed to go there. The directors of the existing royal asylums that had all come well out of the enquiry by the royal commission and their physician-superintendents were to be left to govern them and to be responsible for their condition and for the treatment of their patients. Indeed, the commission was granted little power over them except to visit and report and call for returns. The constitution of the general board was a composite one. There was to be a chairman unpaid, but with considerable powers, and it was clearly intended that a man of recognised position in the country should fill the office. There were to be two other unpaid commissioners who have always been lawyers.

But the chief work of the board was to fall on two paid commissioners. It was in the appointment of the last that the wisdom of the government of the day and of subsequent governments who filled up vacancies was shown. The best known public asylum superintendent of the time in Scotland, Dr. W. A. F. Browne, a recognised authority in that department, a specialist, an author of repute, an administrator who himself had that intimate knowledge of mental disease and of the insane and their requirements only to be acquired by residence among them, and who had been in the van of progress, was selected as one. The other was Dr. James Coxe, not a specialist, but a man who had shown himself to be a medical author of a most practical and physiological turn of mind, and who, as a member of the preliminary royal commission, had studied the whole subject carefully in its wide bearings both in England and on the continent of Europe. Two deputy commissioners were appointed, under a section of the act, to visit and supervise the single insane boarded out in private families, and they were carefully selected, one of them being Dr. Arthur Mitchell, now Sir Arthur Mitchell, the present senior commissioner. It is quite clear that this selection of the commissioners was the most important matter after the passing of the act, and here were men with an ideal experience, with a secure tenure of office, with a great public and philanthropic work before them, and with a new reputation to make. They were face to face with varied forms of provision for the insane, with very good institutions and very bad ones, with successes and abuses. The lunacy act clearly pointed to the development of local interest in the insane and of local responsibility: and the commissioners showed sufficient wisdom and knowledge of human nature to set about developing local pride in local institutions, and a healthy rivalry between the different asylums and the various modes of providing for the insane. They had to meet a body of men at the head of the royal asylums of acknowledged authority in their department who were earnestly trying to do their best for their patients. How they should meet and how they should treat these men was one of the points on which their success and their usefulness to the insane obviously and greatly depended. They had to do in certain matters with the boards of those asylums, consisting often of men of great local influence, giving their time gratuitously to the service of the insane. They had to do with the new county rating boards who were to erect asylums, where

they did not already exist, and govern them when erected. The greatest power given to the general board was to erect asylums and assess the counties for them if the county authorities were absolutely recalcitrant; but this power has never been used or even threatened. They had to do with the authorities in each parish who attended to the poor and initiated all steps for dealing with their insane, and these authorities were the governors of the poor-houses and responsible for the single insane who were boarded out. In addition to these, they had to do with the insane who had property to see that they were well treated by their relations and got the benefit of their means for their own comfort and advantage. In very few instances were these powers made autocratic, so that much room was left for convincing, for persuading and for educating all those in any way directly responsible for the insane. Certain clauses of the act constituted the board as the arbiter between local bodies if disputes or opposing interpretations of the meaning of the statute should arise. They were empowered to institute books, and schedules, and forms which should be uniform for all asylums, and their use binding on all. If the statutory forms of admission were legally complied with, they had no direct power of discharging a patient from an asylum. No power was given them to be a roving commission to go about asylums and judge for themselves as to the sanity of the patients, and to discharge them if they considered them sane. When such was their opinion about a case they had to call in two independent medical men to examine the patient and to report to the board; on that report only they could act and order his discharge. As the sheriff had to grant all orders for the admission of patients into asylums, a power of discharge was vested in him as well as in the board, but only on the report of two medical men. The real authority for the discharge of patients when they were well enough to leave an asylum was to be the physician-superintendent. A clause rendered it lawful to treat recent cases of insanity without sending them to asylums, and not necessarily in their own houses, for six months, with a view to recovery, without any formal medical certification and with no judicial order whatever. The board was allowed to grant authority for the transfer of a patient from one asylum to another and for "liberation on probation" for any period under twelve months.

Such being the general provisions of the Scottish Lunacy Act

and the powers of the lunacy board, the most important questions for the publicist now to enquire into are the following—During the thirty-five years of its continuance has it worked smoothly and well? Have the insane been benefited? Has its general policy conformed to the circumstances of the country and given satisfaction to its inhabitants? Has the board taken a large and common-sense view of its duties, and not a narrow, pedantic, and purely official view? Has the public confidence in the lunacy administration of the country increased? Has it prevented or reduced the lunacy scares and sensations so liable to occur in most countries? Has it diminished lunacy lawsuits which usually have their origin and their success in an ignorant public feeling of distrust and suspicion that justice is not being done? Has it strengthened the hands of the physicians to asylums in their most difficult relationship to their patients, to the relatives of their patients, and to the public? Has it aided asylum authorities by judicious advice, and, where necessary, by vigorous backing up? Has it given the country the full benefit of its unique experience in all state questions relating to insanity? Has it been a steady educator of the public in all matters relating to mental disease, so that hurtful prejudices have been diminished, and the "reproach of madness" lessened in the public mind? Has it sweetened and mollified the opinion of men in regard to insanity so that pity and sympathy have taken the place of fear and aversion to any considerable extent? Has its policy been progressive, willing to follow scientific progress, and ready to adopt the lessons of experience? Has it taken pains to find out new modes of treatment and management and to be itself a learner whenever any benefit to the insane was to be gained thereby? Has it endeavoured to be always just and fearless in its dealings with all that it had to do with, whether the demented pauper patient, or the humble inspector of poor of a small country parish or the councils of the great counties and cities in Scotland? Has it gathered together a body of reliable and apposite statistics that will help the nation in its dealings with the problem of insanity in the future?

I have been in asylum practice now for thirty-three years, the first three years of which were spent in Scotland in the early years of the board's existence, and I knew the general condition of the insane in Scotland then, in and out of asylums. I was then ten years in England and had the great advantage of an experience of the working of the English Lunacy Act and the English Lunacy Commission.

I have since been twenty years at the head of the Royal Edinburgh Asylum, where my position is largely independent of any authority except the public and my own board, and I know the condition of the insane in Scotland now and of the public opinion there in regard to insanity. I have read all the thirty-four Annual Reports of the Board. I should, therefore, be in a reasonably good position to give an independent answer to these questions and to point out some lessons from the history of Scottish Lunacy Administration under the Act of 1857. Without hesitancy, I answer all these queries in the affirmative, and I shall adduce a few facts to show that I am not mistaken.

The whole of the poor insane in Scotland are now provided for suitably, but not at all uniformly, either in public institutions or in private houses living a domestic life along with the inmates of these houses. This has been largely the work of the Board under the powers of the act. They are all under the general supervision and regular inspection of the Board through its medical commissioners and their deputies. The very different symptoms of the different forms of insanity have been taken into account and the insane classified into three great groups, and a fourth group is now being segregated, a different kind of provision being made for each of them.

The acute and curable cases, the dangerous, the troublesome, those difficult to manage and those needing much medical treatment are all in asylums. This forms the first and largest group which is rapidly now in Scotland being sorted up into two, viz., the recent, the curable, the acute, the infirm and all those needing much nursing and intimate medical study and care which are being placed in special "Hospital Blocks" detached from the main parts of the asylums, these blocks having special nursing staffs, a special dietary, and special kinds of wards and rooms. The more chronic and industrious asylum patients are retained in the ordinary wards, forming the second asylum class. The second general group, or we may now call it the third, is formed by the lunatic inmates of the poorhouses. These consist entirely of chronic quiet cases, who are placed in small numbers in special wards set aside for them, the "lunatic wards." The accommodation is cheaper than in asylums and the whole cost of each patient less, yet they have what their mental condition and general circumstances need. The fourth group consists of chronic and harmless weak-minded patients who are boarded with private families in cottages over many of the country districts of

Scotland. They have much liberty and individual attention, and live the life of the country people in whose houses they reside. They don't need much medical attention and are, therefore, only visited ordinarily once a month by a doctor. The Board, the local authorities, and the asylum physicians have gradually been finding out the kind of cases that are suitable for these different kinds of treatment and accommodation, the Board giving a solidarity to the working of this system that it could not have otherwise had. The poorhouses had mostly some spare accommodation not needed for ordinary paupers and this was utilised for their "lunatic wards," thus saving the cost of additions to asylums and avoiding the too great accumulation of chronic cases in one institution, and giving more chance of the new and curable cases being individualised and medically treated. At first the Board evidently did not look with favour on the poorhouse ward for lunatics of any kind; but they incited the local authorities to remedy their defects, and they discovered that there were cases for whom these wards, when improved, supervised and provided with skilled nursing, were suitable.

It is still more interesting and instructive to pass in review the "Boarding-out System" for the chronic insane, for which Scotland has become famous and has set an example followed in other countries. The Board at first did not look with favour on the system: but Dr. Arthur Mitchell, who has really done more than any one else to develop it, rid it of its defects and, taking advantage of its capabilities for good, soon began to see in his work as deputy commissioner that certain of the insane could be made comfortable and happy at a small cost, as inmates of cottages, boarded with the cottagers in certain parts of Scotland. In the report of the board for 1863 he went carefully into the subject, laying down broad principles and pointing out dangers, showing the suitable localities, conditions and patients. Subsequently in 1864 he published a small work on "The Insane in Private Dwellings." Certain villages in Scotland have fair houses, respectable inhabitants, and no industries, where some of the quieter insane can find real homes, can mingle in family life and can thus be made happier in their lives than when aggregated in the necessarily artificial life of pauper asylums. Strict and constant supervision by the deputy commissioners and the local authorities is needed and careful selection has to be made of suitable cases, and this is provided for by the board. In Scotland, at the present

time, there are 8,871 patients or 70 per cent. of the whole in asylums; 875 or 7 per cent. in poorhouse wards and there are 2,560 or 20 per cent. boarded out in private families. Had all the two latter classes, amounting to 3,435, been placed in asylums, the cost of buildings would have been something like £700,000. Only 163 or 1½ per cent. are now in private asylums.

The history of the relationship of the commissioners to the asylum physicians in Scotland is a question well worthy of study by those who desire to understand how an inspecting government authority, with very limited power of directly carrying its recommendations, may influence for good an executive authority without impairing its vigour of action, its power of initiative, or causing undue irritation. To say that no friction or irritation on either side has ever arisen would not be true. To say that one side has always been in the right would be incredible, as human nature is constituted. The commissioners on their side endeavoured to back up the authority of the asylum physician. When reform or advance was needed they tried to have it come through him. They almost never appealed over his head to the asylum board. They mostly recognised that the daily irritation and wear and tear of meeting his patients was a strain on the doctor far worse to bear than the strain on them from their occasional visits to institutions. They did not conceal that to do a thing is much more difficult than to recommend its being done. They did not demand or expect perfection and they were not too exacting about small things or details. They did not, as a rule, go in for fads or small irritating and non-essential recommendations. They tried to enter fairly into men's special difficulties. Whilst always trying to do full justice to the patients' grievances and views, they did not assume that these were of necessity the whole truth. In their personal relations with the doctors, they studiously cultivated a friendly and courteous manner, for the most part avoiding all martinet ways or unduly suspicious procedures. They were willing, nay eager, to notice improvements and advances, to give full credit to those who originated them and to spread them to other institutions. I may adduce a few examples. From the very beginning the commissioners, more especially Sir James Coxe, were observant and commendatory of every arrangement that promoted more freedom among the patients in asylums, that made their lives more domestic, and that promoted employment. A

large number of the patients in asylums were at first wholly or partly confined to enclosed "airing courts" for their out-door exercise. Dr. Sibbald, now one of the Commissioners, then superintendent of the Argyll Asylum, disused his airing courts altogether, sending all his patients into the grounds and on the farm. The success of this experiment showed that undoubtedly airing courts had been too much used and might be attended with marked disadvantages to the patients, which their disuse largely overcame. The commissioners at once went in for an anti-airing court crusade, giving Dr Sibbald full credit for the suggestion, and now few airing courts in the old sense are used in Scotland. Dr. Batty Tuke at the Fife asylum put handles on many of his ward doors so that the patients in these wards could go out and in as in an ordinary house or hospital, and called this the "open door system." The Commissioners very soon saw that there had been too much locking up and advocated more "open wards." All over Scotland every asylum has now half or more of its wards with "open doors" in this sense. Dr. Rutherford at the Argyll, Lenzie and Dumfries asylums in succession adopted a system of management, more free, apparently more risky, but more trustful towards the patients than any asylum doctor had ventured to adopt before; and the Commission soon took up the good points of his system and advocated them all over Scotland. Even though some serious accidents did happen in the course of these experiments towards making the lives of patients in asylums more like those of men and women in their homes, the commissioners backed up the doctors and took a fair share of the odium and risk. More recently I reconstructed our former "refractory wards" and converted them into handsomely furnished and bright "Hospitals" for recent cases, for the sick and for those patients who needed special bodily nursing, introducing into these wards a special nursing staff and more markedly medical arrangements than had existed before in asylums. The Commissioners approved of this as an advance in asylum arrangements and as being for the good of the insane, and they have advocated it all over Scotland, so that there are now finished or building at six asylums such "Hospitals." Above all every royal asylum in Scotland has of recent years rebuilt, extended, or modernized itself *sua sponte*, the commissioners freely using the experience thus gained for the general benefit.

The Commissioners have always more or less, and of recent years,

distinctly more, recognised the spirit of *esprit de corps* in our department of the medical profession with its subtle but strong and pleasant effect in softening personal differences, in heightening self-respect, and in creating personal regard. They constantly attend medical meetings where subjects connected with insanity are to be discussed. They commonly try to get things put right through the process of convincing by facts and the example set by others rather than official reprimands. They want every asylum doctor in Scotland to feel that in many respects Scotland is ahead in the treatment of the insane and that he must help to keep up his country's credit, and this is not done in a patronising or offensive manner. They recognise that it is a great scientific as well as an administrative problem which the Commissioners and asylum physicians have to solve together; and the spirit of modern science tends to produce a fellowship of enthusiasm in all who are earnestly engaged in its work. Asylum administration without the spirit of modern science must be a barren and unfruitful pursuit, as well as an uninteresting if not repulsive employment. If the Scottish system of lunacy administration has been in any way successful, it has undoubtedly been largely due to the fact that medicine and law were allocated their proper places on the Commission. The medical Commissioners visit the patients and the institutions; the legal Commissioners sit at the Board meetings and give the benefit of their legal knowledge.

With all their *suaviter in modo*, however, the Scotch Board can exhibit the *fortiter in re* and have exercised their statutory authority vigorously when the occasion demanded it, and do not hesitate to take the public along with them in carrying any important point. They have had several very important differences with asylum Boards of Directors and physicians and have fought out the matters in dispute sharply. They have not always been in the right on all points, but such differences have now almost ceased.

On the other hand, the asylum physician-superintendents have gradually come to recognise how great a help to them in their work the Commissioners are. They see that where personal liberty is involved the public and the law must step in with efficient safeguards and that such safeguards must be independent and outside of asylum influences altogether. They have come to recognise that in this way only will the public have full confidence in them

and their work. They have, therefore, loyally accepted the position and endeavour to satisfy the Commissioners in every reasonable way that the real interests of the insane are safe in their hands. They are disposed to take advantage of the wide general experience of the commissioners and to ask for counsel and help in their difficulties, a spirit which they always find appreciated and cordially met. The irksomeness to human nature of being inspected and looked after is thus greatly done away with. They know that when they do their best they will get credit for it; that when unavoidable mischances arise they will be fairly and not suspiciously treated; that their individual ideas and efforts will be appreciated though they may not be quite in the routine lines. They have come to look on the Commissioners as a great bulwark and protection to them, exposed as they are to the suspicions and misinterpretations of the public that is necessarily ignorant of their difficulties. Their comfort in their work and in life is thus increased. Some men are by temperament very jealous of official control or supervision and are irritated and often embittered by it. Our Commissioners have been on the whole large-minded in dealing with such men so long as their work was well done. When an asylum superintendent once gets his own Directors or the Commissioners on the brain it is all up with his future official happiness. He gets suspicious of everything they do, thinks of nothing else and becomes too thin skinned to work comfortably with. Our Commissioners have not been unmindful of this phase of human nature, trying their best to avoid giving occasion for it. Men who will not recognise that their work is a greater thing than their feelings cannot always be propitiated, however.

One possible reason of the success of the Scotch system of lunacy administration has probably been the smallness of the country, which enabled the commissioners to know each asylum and its local circumstances well, and to know almost every patient. Sir Arthur Mitchell, now the senior medical commissioner, did a very valuable service to several of the old royal asylums by investigating their histories, bringing out the conditions of their origin and their original, *raison d' être;* this information coming from an impartial authoritative source helping to get these institutions out of difficulties they had got into, and saving expensive fights before the law courts. At the present time the whole sys-

tem works with smoothness, while the insane are nowhere better taken care of, and our institutions are every year visited and are commonly praised and held up as examples by distinguished and impartial visitors from all parts of America and Europe.

Since the 1857 act came in we have never had any important lunacy law suit in Scotland, and it is certain that the Scotch people have great confidence in their system of lunacy administration, as is evidenced, amongst other ways, by what is constantly said of it in their great newspapers.

THE TREATMENT OF DEGENERATIVE PSYCHOSES.*

BY JULES MOREL, M. D.,
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For nearly three years I have been daily occupied with the medico-psychological examination of prisoners and young offenders in the reformatories of Belgium. As my experience has enlarged, I have felt the high importance of what I like to call my mission and the happy results that may follow from it in behalf of those deprived of intelligence and moral sense. I called attention to the great importance of this examination before the psychological section of the British Medical Association in 1892,† and there offered the following conclusions:

First.—That every prison with a population of, for instance, one thousand or more convicts should have a special ward in which one could take proper care of all the criminals who have become insane during their detention and are susceptible of recovery.

The treatment of the criminal and curable lunatics in a separate building of a prison seems to me to have great advantages. On their discharge these unhappy men could not have the stigma of having been in a lunatic asylum and consequently it would be easier for them to reconquer an honorable place in society. The special lunatic asylums for criminals ought only to be opened for those whose mental condition would not allow of rational treatment in the division of the prison called the lunatic ward; they should also receive the insane criminals whose incurability is more or less established.

Second.—That each prison, and a portion in each ward destined for criminals having become lunatic, ought to have a special staff of attendants with the necessary qualities, instruction and education required to treat rationally the convicts who become insane.

Third.—That all convicts belonging to the class called imbeciles ought to receive special physical and mental care. They ought not to be discharged before the end of the duration of their imprisonment, because, it is this class of degenerates that furnishes the great contingent of recidivists. One ought also to group in this class those criminals who, by their former way of living, have weakened their body and mind.

Fourth.—That society does not take sufficient care to preserve malefactors from relapse. In the present state of things, and almost generally, the

*Read at the International Congress of Charities, Correction and Philanthropy, (Section IV, on the Commitment, Detention, Care and Treatment of the Insane), Chicago, Ill., June 12-18, 1893.

† The Psychological Examination of Prisoners, in "The Journal of Mental Diseases," January, 1893.

old criminals feel themselves abandoned by those who ought to protect them in a social point of view; very often they are obliged to look for hospitality in lodgings inhabited by the lowest class of society. It is not easy for them to find work again, consequently they are obliged to spend most of their time in these houses of ill-repute. With the little money they have they begin to drink; they make the acquaintance of bad people, and by and by they begin to attempt, or are provoked to commit new crimes.

The psychological examination has often proved that these individuals on leaving the prison cured, as much as possible, physically and morally, if they are obliged to follow the course we have described, soon again decline mentally, and, above all, lose their will and their self-respect.

I read also, before the Congress of Anthropology held in Brussels a few days afterwards, a paper "On the Nature of the Incorrigible,"* and asserted:

That anthropologists cannot classify the incorrigible without having recourse to the science of pathology. Degeneracy may involve at the same time the physical and the psychical state, but it may vary greatly and predominate in one or the other of the two states. Lombroso's school has devoted too little of its attention to the opposite etiology which considers the amelioration of man. After having studied the so-called incorrigible as well among children as among youth, we concluded: In order to give to the theory of incorrigibility some standing, some scientific value, it would be necessary to be able to bring forward certain specimens as having passed through all the different systems of treatment and education. The proof of incorrigibility in men who, psychically, present no hereditary taint, is, therefore, yet to be made. . .

The reformation of so-called incorrigibles should be attempted in the reformatories and prisons; it should be continued even outside of these institutions. . . . If every country had the good fortune to have a law for the protection of childhood; if the authorities had sufficient latitude to remove the children from parents and tutors incapable or unworthy; if the governments would organize methodically a system of education for these unfortunate creatures, in a very few years we should see criminality decrease to a considerable extent.

To-day, and in consequence of the kind invitation of your worthy President, Dr. G. Alder Blumer, I have the honour to offer to the section on the Commitment, Detention, Care and Treatment of the Insane, of the World's Congress of Chicago, the benefit of my unintermitting study, hoping that the alienists of the New World will be pleased to accept favorably these few lines. Indeed, in what other part of the world could we meet more extended ideas of charity than in the United States? Is it not in

* The Monthly Summary, 1883, Elmira No. 2, and Bulletin de la Société de Médicine Mentale de Belgique, 1892.

this country that one ever says and repeats: No State or nation was ever ruined by the greatness of her charities? The Lord seems rather to prosper those peoples who are most generally charitable toward the helpless and the unfortunate.

I submit these lines to your learned appreciation and I should feel myself well rewarded if the *élite* of the American alienists who favour me with their kind attention, could also favour me with the expression of their opinions concerning the question of the unfortunates predisposed to insanity and criminality either by heredity or by acquired diseases or bad education.

During my later studies I had the good fortune to make the acquaintance of the excellent German book of Dr. Koch, Medical Superintendent of the Lunatic Hospital of Zwiefalten, entitled: "Die Psychopathischen Minderwertigkeiten."* This title of "Psychopathic Depreciations" is given by Dr. Koch to a very large number of these psychical manifestations, so varied in their nature and intensity which, without belonging to the class of mental diseases proper, cannot, nevertheless, be reconciled with the idea of perfect mental sanity. Under this head of psychopathic depreciation we meet cases perhaps better known in mental science as premonitory symptoms of insanity, incomplete recoveries, nervous temperament, hereditary neuroses, obsessional insanity, hereditary madness, neurasthenia, neuropathic constitution, etc.

Koch prefers his single denomination and, in preparing his work, his aim was to call the attention not only of the medical world but of all persons interested in pedagogy, law, and morals. In order to make his book, or rather the importance of it, better known, he made several divisions and subdivisions of his psychopathic depreciations; he took a special care to establish evidence of pathological shades corresponding to functional alterations of the brain and the nervous system; he made two great divisions, congenital, mostly hereditary, and acquired. Each of these conditions were divided into three others: psychopathic predisposition, psychopathic defect, and degeneration. A few words are necessary to define these conditions as we meet them in the different cases of mental weakness of which I have to speak: Congenital predisposition in psychopathic depreciation may be latent or evident. It is characterized by an exaggerated sensibil-

* Baumburg. Published by Otto Maier: 1893.

ity accompanied with a lack of activity or of energy of the nervous system.

In the psychopathic congenital defect we have anomalies of the psychical excitability, exaggerated excitability, rapid weakness (irritable weakness), want of balance in the mental faculties, an exaggerated individualism, a want of uprightness and judgment, inconsistency in the conduct, eccentricities, singularities, obsessions, and periodicity in these symptoms. Also Koch speaks of eccentrics, desequilibrated, overscrupulous and capricious persons, foolish, misanthropes, redressers of wrongs, reformers of society, etc.

The congenital degeneration is characterized among other psychological deficiencies by a mental weakness, now in the province of the intelligence, now in the department of the moral sense, and at other times in both the intellectual and moral spheres.

The acquired psychopathic depreciation may naturally depend upon a predisposing etiology and in this case heredity will be the most important. It is needless to mention the efficient causes before this learned body; they are, moreover, too numerous. Great caution is to be used here in order not to confuse this depreciation with neurasthenia and the first symptoms of general paralysis.

In the psychopathic acquired defect the learned German alienist distinguishes the idiopathic blemish from that resulting from a vitiated constitution from intoxications, infections and nervous diseases, railway-brain, onanism, puberty and pregnancy.

The acquired degeneration is, like the congenital degeneration, a pathological condition, an intellectual or a moral weakness. It may be the consequence of an uncured insanity, of infectious diseases, of cerebral traumatism, etc. We may call it a specific degeneration when it follows alcoholism, senility, epilepsy or any other chronic neurosis.

The above quoted divisions and symptoms make it clear why Dr. Koch is not a partisan of Lombroso. We also have only to mention the results of the last Anthropological Congress, held in Brussels last year, to prove how the Italian school has lost a great deal of its prestige. This may be of importance before entering upon the practical part of my subject.

What I am now advancing is not new to competent alienists, who are daily called to give their opinion in doubtful cases, and, consequently, in cases of psychopathic depreciation. But how

often does it not happen that patients and their friends only take the advice of their family doctor who, many times, knows scarcely anything about mental diseases; who, generally, even when he knows of the results of heredity and acquired predisposition, is incompetent to properly advise his patients, because he never passed a medico-psychological examination when taking his degree, or never had the opportunity to practice to any extent in mental diseases.

How difficult it seems, and certainly is, in general practice to recognise the diminution of the force of resistance in nervous diseases! How little attention is given to the question of predisposition or heredity! How often the predisposed are living under bad influences!

The treatment of all psychopathically depreciated individuals and consequently their preservation from the evils that threaten them, ought to begin in their earliest infancy. Let us first avoid assuming hereditary predisposition when either insanity or a serious nervous disease has been stated to have occurred only once in the parents. Too often such a conclusion is adopted and hope of recovery in the descendants is given up, because one of the parents or the grandparents was affected with insanity, for instance at the period of puberty, of pregnancy, even of senility or by reason of another organic disease of the brain. A preliminary examination of the insane needs to be made before one is enabled to judge in regard to an appearance of heredity. It is only after a careful examination that one can believe and sometimes prove the existence of heredity. The proof will be beyond doubt when in parents and in their children stigmata of anatomical and psychical degeneration are abundantly found.

Whatever may be the prognosis after examination, the alienist need not always despair, except in cases of idiocy in a very high degree and of extreme dementia. The physical and mental training in the special asylums for imbeciles and idiots give such splendid results that we can not imagine how parents, and, especially, those charged with heredity, are not encouraged and advised by their doctor and friends to try, from the first year of the child's life, special measures for their preservation. If a good and persevering physical and psychical management of the weak-minded gives such admirable results in asylums, it would be still better if the child could be trained from the earliest period of its

life. This subject is ignored by the public, and in every case not sufficiently appreciated. Great efforts should be made to call the attention of all educators to this capital point.

For cases of simple congenital predisposition it is impossible to give here a full description of the prophylactic treatment. It will be sufficient to mention that indications and directions are in this matter very numerous, and that patients ought to be under the care of a physician possessing an extensive knowledge of this subject. In many of these cases it is of urgent importance that the family doctor be assisted by an alienist, as very often the judgment and the science of two medical men are not too much to save a child for the remainder of his life.

The cases of psychopathic defect must be taken into serious consideration as we are now living in the century of the neuropathies and nervous weaknesses. Here the duties of an alienist and of the medical men in general are very important. First of all we have to try and preserve the patients of a nervous, or of a weak constitution. It need not be said that we have to oppose their marriage, as nothing exactly proves their hereditary tendencies. However, advice is to be given to them, they ought to know in what state of health they are living, they must be informed of the great danger of the matrimonial union with a person of the same tendencies and especially when consanguinity exists between them.

The greatest care is to be given to children of this class. Experience, already, has led to the conclusion, that mental and physical overwork increases this defect; that young brains must not be overexcited with pernicious thoughts. The will of the children ought to be cultivated and strengthened, and consequently their mind should be regularly educated. The bodily exercises should be regular and not exhausting; the digestive functions should never be artificially stimulated in any way to increase unduly the assimilation of the food. The development of the intelligence, the sensibility and the physical training ought to be looked after in the same way. Consequently special attention should be given to the schooling and education.

Again, it is not possible to give here all the special directions. It would lead us too far, and, moreover, it would not be possible to give them completely, as they vary so much according to the individual under care. Nevertheless, we must know that physicians and parents or educators ought to understand each

other, and, once a plan of living is laid down, it ought to be followed and watched every day. The success depends on this. Let us not forget the great influence of hygienic conditions (air, light, food, dress, habitation, sleep, muscular exercises, etc.), for, without them, the efforts made for mental training are useless.

When putting these orders into execution, we not only prevent an increase of the congenital tare, but also we perceptibly amend the psychopathic depreciation that no doubt in the usual way of living would certainly become worse. The object very often thus secured is double: aggravation has been prevented, amelioration has been obtained.

But how frequently the efforts are unsuccessful, because either the family doctor, and the educator have no time to superintend the treatment and often also are unable, for many reasons, to individualise the treatment as they ought. Therefore we cannot sufficiently appreciate the high value of well organized special boarding-schools for the weak-minded.

The special aim, says Koch, is to teach the patient and to enable him to govern himself, to repose confidence in himself. To reach this end, a great deal of patience is required of him who undertakes this treatment; he has to exercise himself to win this patience; he must know how to divide the time for work and the time for rest. For many of these mentally depreciated subjects, variety is wanted as well for the physical work as for the mental training.

Those charged with the application of these remedies and exercising good judgment, are soon enabled to distinguish those cases that are the most favourable, from those that are the most difficult; they can soon say, that a favourable remedy for the one may be noxious for another and vice versa. The use of tonics, spirits, cold baths, etc., and even hypnotism, may be tried, but great caution is to be exercised and these remedies should never be employed or prescribed except by medical men.

What has just been said proves the superiority of good special institutions. All those connected with them have very delicate and difficult duties to perform. As the end to be attained is unique, all the teachers and other persons belonging to the institution should do all they can, to co-operate with and to fulfil the instructions of the medical staff.

Even the subjects of congenital psychopathic depreciation in a

high degree, as for instance, those suffering from obsessions without delusions, are not inaccessible to successful treatment. In those cases, naturally the most important part belongs to the medical treatment as in most mental diseases the more serious cases, dating from the first youth, and aggravated in proportion to the age, are more difficult to be completely cured. However, we can often stop the progressive evolution, and patients can be ameliorated in such a way that the improvement makes their life very bearable. How often since attention has been called to neurasthenia, the so-called American disease, but existing in all civilized countries of the world, have these sufferings, these formerly incurable nervous exhaustions, been cured!

The same results may be obtained with the intelligent but psychopathically depreciated subjects. Almost daily we see these successes when patients are enabled to understand the nature of their sufferings, to discern that their disease does not belong to insanity, that it will never lead to a mental disease. This understanding is one of the best of all anodynes; it reminds me of what one day the celebrated Professor Donders of Utrecht (Holland) told to one of his patients suffering from an hyperæsthesia of the optic nerves of a neurasthenic origin: "What science cannot, often time and hygiene can, realize." The intelligent patient had received from this learned man the assurance of his sight; a good hygiene and mental rest did soon afterwards produce a cure.

Is not this the best proof that the psychopathically depreciated ought to give their entire confidence to the person of their doctor's choice, who has, so to say, to nurse and to help them according to the medical directions?

The acquired psychopathic depreciations, of either the first or second degree, may also exist from the first years of the child's life. Already we have said that neurasthenia can be confounded with it. These depreciations, in proportion to their intensity, are successively characterized by a state of fatigue, and even a nervous or mental exhaustion accompanied with physical weakness and functional trouble in one or more organs of sense,—by a pathological debility of the intelligence, and impaired memory especially for recent facts, a difficulty of comprehension and of bringing up ideas and judgment,—often together with other troubles, fears, despairs, especially in cases of intoxications by morphine, cocaine, bromides, coffee, etc., in cases also of passive cerebral

hyperæmia, traumatic neurosis, etc.—and increased by irritability and excitability when the troubles arise from onanism, puberty or other period of transformation in the sexual life. In the highest degree, when there is nearly no hope of recovery, the patient is in a lingering state for the remainder of his life. These cases are met with in cerebral traumatism, in organic cerebral diseases, and as a consequence of many infectious diseases. In this degree we have modifications of the character, and in the sphere of the sensibility and the will. These troubles are still more marked in hypochondria and hysteria.

As to its treatment, many prescriptions are the same as for the congenitally depreciated we spoke of. It is a capital duty to begin to fight, from the first symptoms, against predisposing and occasional causes, because if you prevent aggravation, you make recovery possible. Especially in these depreciations, the alienist ought to utilize all his science and prove that only mental science is insufficient to cure such patients. Not only has he to guide the intellectual life, the life of sensibility and will; he has also to remedy the morbid somatic conditions, to superintend the general régime: times of work and rest, air, light, dressing, preservation from alcoholic and other excesses.

So doing, following the scientific prescriptions, not only one increases the force of resistance of the patient, but also of future generations. Often one succeeds in increasing the power of commanding one's self, of renouncing certain factitious wants and passions, enlarging the feeling of duty, understanding the aim why he is born, and what holy mission he has to fulfil upon earth. The intelligent man has always to have in mind that he has to improve himself, to try and benefit his fellow creatures and so he fulfils before society and the Lord the most important of his duties. Medical men, parents or educators, have always to think about these essential principles, and when they do not reach the wanted results at home, they have to commit their patients to proper special institutions, but never to those where care and education is given by routine.

In the highest degree of congenital depreciation we have the real mental degeneration. Persons suffering from this defect are better known under the name of degenerated or weak-minded. Many of them are found in lunatic asylums; the greatest part enjoy their liberty but the population of the prisons and of the

reformatories count a certain number of them. In order not to repeat, we will include in the same division the acquired psychopathic depreciations, also degenerates or weak-minded, as in a medico-psychological view the treatment may be said to be nearly the same.

We all know that a great difference exists in the mental state of health of the degenerates. Some degenerates are distinguished by a great deficiency in the intellectual sphere, some others are characterized by a great want of moral power, others finally have deficiencies in both the intellectual and the moral spheres.

Although many degenerates are hopeless as regards treatment, a great number, a proportion of nearly sixty per cent., is suited to be submitted to a mental training. According to Shuttleworth and Seguin, if a complete cure may be considered as impossible, many of the most serious and disagreeable symptoms can, nevertheless, be removed. The degenerates, inaccessible to kindness, to severity and to every kind of treatment, are individuals, so says Koch, whose pathological lesions are identified with physiological wickedness. Notwithstanding this, some of them often show one side on which they can be taken, especially when they are kept away from noxious influences and when they are brought into a new medium. This fact is to be verified in well organized lunatic asylums; seemingly hopeless weak-minded cases, after a certain time of training, are often enabled to learn a handicraft or a trade and to return to their family.

Some weak-minded of the lowest degree, if unable to reach this so-called perfection, can still be made useful and happy, although they must meet certain difficulties in the course of their existence. These results can be obtained, but before attaining them a great deal of courage and energy is requisite. Courage and energy should be applied, great should be the patience and persistence as long as some hope remains. Do not even despair with morally insane. Meynert, Von Krafft-Ebing, Koch and others of the best known alienists have succeeded, after a certain period of treatment, in attaining more or less great and permanent results. What nature really refused cannot be given to a degenerate; but sometimes it happens that something can be added to what already exists, and very often more natural qualities can be discovered in an individual than was to be hoped.

The qualities required for the training of degenerates are so numerous that it is very seldom parents and relations possess them; often they are unable to form for themselves any correct opinion of the mental state of their weak-minded charges; often too, the intellectual powers of the relations are insufficient, and often also they refuse to be good aids because they cannot believe in the good results of a rational treatment. And without a gradual education the mental deterioration of the degenerates increases without interruption. For all these reasons we have scarcely any hope of amendment if the weak-minded are kept in their families.

Happy are the degenerates confined in season in a good lunatic asylum or in special schools for weak-minded and even in reformatories. Some are to be found in the prisons. The most fortunate are those who encounter on their way medical advice rather than a judge! The staff of the lunatic asylums, or better still the staff of the asylums for idiots and imbeciles, know their mental deficiencies, and the medical superintendent keeps them under proper care as long as they are unable to join their family.

The reformatories and even the prisons mostly receive the neglected or abandoned degenerates, who have become criminals.

Can a happy modification of the degenerated be obtained in lunatic asylums? Does a reformatory suffice to amend the psychical lacunae of the weak-minded offenders? And I mention only the prisons, as a recollection, because in the present situation of the penitentiary system I don't believe very serious improvements can be reached in these institutions.

I make haste to say that at the present time we possess several well organized asylums with special sections for children, which have all the desired means to ameliorate the mental state of the weak-minded, but only upon condition that they should be sent to them when their age and the degree of their intellectual powers still give some hope for their return into society.

I have seen many lunatic asylums. I know all those of Belgium and several of France, Germany, Austria, Holland and England. I have been surprised to ascertain that, in most of these asylums, little attention is given to the education of patients of no more than fifteen or twenty years of age. In asylums with special sections for idiots and imbeciles, it is a rule that the children leave the school at the age of about fifteen years for the workshop where they have to learn a trade suited to their phys-

ical and intellectual strength. At about this age it is thought that sufficient experience has been gained with the feeble-minded and that one may then conclude as to a favourable or unfavourable prognosis.

The foregoing observations must be applied to the training of children in most reformatories. If instruction and moral training of the young offenders is what medical science requires at the present time, I should say that pupils of reformatories are more happily trained than the children in many of the special sections of lunatic asylums. In Belgium the pupils generally leave the reformatories between their eighteenth and twenty-first year. In many European reformatories, perhaps also in some American, the pupils are allowed to leave sooner and even without a previous determination as to whether they are weak-minded or not.

Daily experience proves this is a great mistake. If the old pupil is weak-minded, if he has the misfortune to be fatherless or motherless, if his father, his mother is disqualified or unable to give a good education to their child, all that has been done in his favour in the industrial school or in the reformatory is lost, the boy may be considered as abandoned.

Is this not one of the inconveniences of the reforming school? It is only in case a pupil should have proved, during all his stay in one of these institutions, that he has been an idiot absolutely unable to assimilate the least notion of a training, instruction or profession, that care is taken by sending him to an asylum.

Moreover, generally, it is considered in the reformatories that when a pupil has succeeded in mastering the primary instruction, or the first principles of a trade, he is prepared and ready for taking care of himself and associating with his fellow creatures, and is able to know his duties. He is set free and takes his liberty when the door of the institution is opened to him. If he belongs to the class of the degenerates, what good can one expect from him on his return into society? The reformatory may have it registered that he was a boy of a bad disposition, indifferent, undisciplined, immoral, in one word he had a bad record. No good report can be given of him.

What ought he to do without any adequate protection? Members of the committee of patronage dare not and cannot introduce him into a workshop or into any other business; certainly

they cannot do so without blushing. He who deserves perhaps the highest commiseration does not receive the slightest protection! And this because the managers of some reformatories have not the good fortune to have chosen a competent man who, in this case, would have been enabled to discern the psychological situation of this probably weak-minded individual.

My aim is not to make known the splendid results of many reformatories. These results only appertain to their normal population. These institutions receive but young offenders; usually they have but one programme, no selection or rational classification is made between the pupils, be they intelligent or not. I think the time has come that all offenders, young and old, but especially those of the reformatories, ought to be mentally examined if, after a few weeks of their detention, some doubt arises concerning their psychical conditions. It ought to be taken in consideration that many offenders are born from parents with congenital or acquired and consequently hereditary mental taints; that their children, not being born in a normal physiological condition, come to the reformatories because of the tare of degeneration they have inherited or acquired and because of the bad education they received from their unworthy or incapable ancestors. Therefore they ought to be classified according to the degree of their mental capacity, and special treatment ought to be prescribed for those who move every one's pity. Double charitable work would then be realized. Efforts should be made toward raising up the unfortunate, not only in his own, but also in society's interest.

With these modifications introduced into the reformatories much better results ought to be obtained from the beginning and at the entrance of the inmates; careful psychological examination should be made from time to time if any reason should exist for it, as, for instance, insufficiency of progress obtained, suspicion as to their mental faculties, bad conduct, etc.

Since the service of mental medicine has been introduced in the Belgium prisons and for the undisciplined pupils of the reformatories, we are almost daily occupied with this, in so many respects, difficult question. We have examined more than five hundred young and old offenders, we have taken up their case at the moment the condition of their intelligence seemed suspicious to the managers, at the same time, as no good medico-psycholog-

ical examination can be made without inquiring of the pathological conditions that could have contributed, in the course of the existence of the offenders, to trouble their mental faculties, we directed our investigations to the nature of their education and their passions, we wanted to know the conduct of their parents, their uncles and aunts, brothers and sisters, and further still, the nervous and mental diseases of their relatives, in a word, we sought for all the information that could be called upon for the proposed end.

I have dwelt too long upon the reformatories, but it ought to be remembered that in Belgium we have no good asylums for imbeciles. Usually these weak-minded remain free and very often they are either neglected or abandoned by their parents; they become delinquents and then, when young, the government keeps them in reformatories. So it is explained how so many degenerates are found in these institutions. If this fact were known sufficiently, no doubt a rational treatment could be undertaken in these schools as well as in the asylums for imbeciles. One would begin naturally with the treatment of the congenital tare and with this often the progress of the depreciation or degeneration would be stopped; it would be neutralized or even diminished.

Special principles of the treatment of the degenerates are very numerous. One ought to remember that many of them are so weak-minded that even their organs of sense have but the slightest education. The educator has to know this; it is of capital importance. He has to systematically study these senses, and the degree of their functions; and, when necessary, he has to classify his weak-minded charges according to the degree of their degeneration. The educator has also to study their moral nature and their natural feelings. He should try and discover their natural dispositions and take them into consideration in the education he has to give; he must utilize them because they can help in the choice he has to make of their profession.

These few suggestions point in favor of an early treatment of the degenerates. They also prove how the interference of the educator should be slow and prudent, and, as the natural dispositions of the weak-minded are limited, one ought not to make haste and attempt too much for fear of exhausting their mental power. The nature and the degree of the progress to be made will vary considerably according to the qualities of him who has the charge of

their improvement. The very important thing is for the teacher to win the confidence of his patient, and to assure himself at the same time that the patient reciprocates his confidence. Moreover, the teacher has to know the limits of this confidence in order not to destroy the object he wishes to attain.

It is natural that in the course of the treatment, and especially in the beginning, there should be disappointments, but one must not lose his courage if disappointments are met; and one ought never to make known, by words or otherwise, in the presence of the degenerates, that any hope is lost. Experience teaches us every day that we have never completely to despair and that, by persevering, many disappointments are largely compensated for by brilliant results. One cannot guess at the might of the combined action of kindness, patience, perseverance, justice and equity. One ought to so work the mind of the degenerate as to extract from him something useful, and the least occasion ought not to be lost to prove what we wish to obtain from him.

What I just said argues in favour of the individualization of the treatment. When enquiring after the natural disposition of the degenerate, as well for his instruction as for his future professional teaching, we ought to try and develop at the same time his character.

To attain these results, the teacher must evidently not consider himself as having the same situation as a teacher of the lower classes. His mission is much higher, and, because of the numerous difficulties he will find on his way, and of the superior qualities he ought to possess, he will have to stay a longer time with his pupils.

Unhappily in most countries, there are not sufficient asylums for imbeciles and consequently for degenerates. Even supposing families can avail themselves sufficiently of the institutions, parents, and especially poor parents, are not to be readily separated from their children when they are idiots, or morally insane, except by superior force. The other children, the imbeciles, go to school, they make no progress, and very often are a hindrance to the class. The teachers, seeing no results are obtained, neglect them, or do not trouble themselves with them any more; then they are really abandoned. If the teacher gives them an excess of kindness and patience, it will be at the expense of the better pupils.

All these facts being taken in consideration, why should governments not undertake the creation of special institutions for weak-minded children? Such institutions, if well organized, would certainly diminish the population of the reformatories, and also the population of lunatic asylums and prisons. There, doubtless, most of them would be enabled to receive some education.

The creation of a law forfeiting parental control on account of incapacity or unworthiness would soon fill up and multiply such institutions. It is in these schools for the weak-minded that the alienist will be enabled to obtain undeniably brilliant results and to separate, at a certain moment, the degenerates beyond any hope of becoming suitable for society, or noxious for themselves in a moral point of view.

The incurable degenerates often go from a lunatic asylum to a prison and vice versa. Dr. Koch wishes to see them brought together at a certain age, also in a special institution. We completely agree with him on this important question. Governments ought to afford protection for all the degenerates who after a certain time of treatment are considered as hopeless for society; they want protection as well for themselves as for the public security. They should not be admitted for any fixed time but for as long as public security, morality and order may demand it.

WHAT IMPROVEMENTS HAVE BEEN WROUGHT IN THE CARE OF THE INSANE BY MEANS OF TRAINING SCHOOLS?*

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It is the practically universal testimony of those engaged in caring for the insane, in asylums having training schools for attendants, that work in connection with these schools, systematically pursued and carried forward diligently and thoroughly, has been productive of great good; that through it a higher class of service has been secured, and a more exalted ideal of usefulness has been realized. The movement to establish training schools for attendants and emphasize the hospital idea in American asylum work was successfully inaugurated by Dr. Edward Cowles, Superintendent of the McLean Hospital, Somerville, Mass., in 1882. In 1884 a training school was organized in connection with the Buffalo State Hospital; in 1886, one in connection with the Illinois Eastern Hospital for the Insane at Kankakee, Ill., and in 1887, one at the Willard State Hospital, New York.

The impetus created by the enthusiasm and earnestness of these early and prominent workers, and the success which attended their efforts toward the attainment of the high purposes in view, have been felt all along the line. No less than nineteen American institutions (see below) now possess systematically organized and thoroughly equipped training schools for attendants, and for them there may be justly claimed a special and important place in psychiatry. Their creation has been the logical outcome of a desire for improvement in asylum service on lines similar to those developed through nurses' training schools in general hospitals, and the necessity for their existence in promoting modern methods in the care of the insane has been generally recognized.

At a time when restraint was much employed in the management of suicidal, violent and disturbed patients, the necessity for recognition of the operations of the insane mind as a guide to tactful

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management, was less than in these modern days, where little or no mechanical restraint is applied, where open-door and parole privileges are extensively given, and where nursing, systematic exercise, employment, diversion and personal attention have displaced the ancient repressive regulations and appliances. In granting greater privileges to patients and according them that extension of liberties which approximates institution-life to home-life, the physician is helpless without the assistance and co-operation of the skilled attendant. The latter must be quick to detect change in mental operations, departure from habitual conduct, or development of tendencies which demand an abridgment of privileges. To stimulate this discriminating ability, to teach the attendant how to read the mind of his patient, to develop his perceptive and and reflective faculties,—all these are necessary. The attendant must learn how to place himself in close harmony with his patient, and be quick to apprehend the reasons for any new or unusual manifestations he displays. He should be among the first—perhaps the first—to note the signs pointing to a termination of morbid mental action and return of natural habits and impulses. The future of his patient may depend upon this prompt recognition and the steps taken to promote it. The early signs of improvement, revealed darkly at first, but penetrating like a gleam of sunshine through the cloud of obscurity which has overhung his previous mental operations, must be seized upon and quickened, that the struggling reason may not be impeded in its efforts to re-assert supremacy.

In discussing the question of the relation of the higher training of attendants to the practical problems of psychiatry, and in replying to the question, "What improvements have been wrought in the care of the insane by means of training schools?" much is involved. That they have promoted the recovery of patients is, I believe, an indisputable fact; this being due to—

First.—Their increasing the adaptability and resources of the attendant.

Mental training in useful lines broadens the horizon, develops the resources, and adds to the fund of knowledge from which to draw in the exigencies and emergencies of life. That the highest degree of efficiency in work may be attained, it is pre-eminently necessary that the reason for it should be understood. Under such circumstances it is more enthusiastically undertaken and more successfully

carried out. Explicit direction may be successfully followed in a machine-like manner where the path is clear and the end forseen from the beginning, its accomplishment depending merely upon the expenditure of a certain amount of labor in definite lines. In the very delicate relation which he bears to the insane patient, however, too many exigencies arise to permit on the part of the physician a clear conception of the case from the first, and detailed instruction as to its hour-to-hour management. A general direction, for example, to the effect that his patient shall in pleasant weather take exercise in the open air, may be followed by the attendant in an automatic manner and in accordance with precedent, good results ensuing. It is doubtful, however, if the same amount of benefit will accrue to the patient as will follow a clear conception in the mind of the attendant of the ultimate purposes of the direction: that is to say, the effect of exercise upon the organic functions, the influence upon the circulatory and nervous system, and the psychical stimulation which may be introduced into this commonplace and every-day performance. In this connection there are matters which the thoughtful and trained attendant will take into constant account, of which the thoughtless and unskilled will be heedless. Is the patient's physical condition at this moment such that he can endure without dangerous fatigue the contemplated walk? Are his delusions more active? Will they interfere with his comfort in going out, or create trouble on his return? How may emergencies of this kind be met should they arise? Is he morbidly sensitive, and is his objection to going out due to the company with which he will be associated in his walk, or to the apprehension he may have of meeting strangers? What tactful management will overcome these scruples? Is his nervous system in such condition that he can bear the heat of the sun? Does he show any evidence of disturbance of the circulatory or respiratory system which would contraindicate his going out? Are his present objections based upon real physical illness, or do they arise from delusions? How can the walk be planned to introduce some healthful mental stimulation and diversion and thus interrupt or change the morbid mental currents? That the trained attendant is constantly asking himself questions similar to these, every-day experience indicates. He regulates the patient's walk by his condition. If any doubt exists as to the reality of the symptoms of which the patient complains, and upon which he bases

his objection to exercise, he accords him the benefit of the doubt. If he finds his patient sensitive and discovers that he prefers to remain in-doors because of dislike to a large company, he plans to go out with him alone, or, reporting the fact to the physician, assists in making some arrangement which will overcome the scruples and meet the wishes of the patient. Had he in health a special interest in certain out-door employments, he aims to re-excite this interest by skillful allusion and opportune suggestion. Is he weighed down by distressing and anxious thoughts, his attendant aims, by timely conversation, to direct his mental operations into healthy channels, or by golden silence and unexpressed sympathy to share his burden.

To prescribe rest in bed for a patient who is apparently vigorous and able to put forth much muscular effort in morbid lines strikes the inexperienced and untrained attendant as a strange misapplication of methods; whereas knowledge of the pathological state of the brain in excitement, of the danger lurking in undue exercise, and of the relation between sensory stimulation and impulsive acting, promptly places the trained attendant in sympathy with the course adopted. He appreciates the influence of posture in the management of the case, and recognizes the importance of the withdrawal of disturbing influences which tend to keep excitement alive. He gives the plan his co-operation intelligently, and not in a half-hearted, irresolute or grudging manner.

The mental discipline which the training school affords develops the perception, reason and judgment of the attendant, increases his self-control and tolerance, and brings him near to his patient's point of view. There was brought to my notice the case of a patient of dangerous propensities and great irritability, who constantly clamored for his discharge from the institution and for protection from his fancied persecutors. Against the physicians, who, in their dealings with him, were compelled to resort to frank conversation in explanation of their reasons for detaining him in the institution, he had contracted a strong antipathy. With the attendant, on the contrary, whom he did not hold accountable for his detention, and whom he recognized as merely the agent of some one else, he was on the best of terms—this due mainly to the judicious character of the attendant's management. Without concurring in the patient's delusion that his bad symptoms were due to the machinations of enemies, he was accustomed to express sympathy with him in his sufferings: to say "That's too bad,"

"I hope that won't happen again," "I will see when I can what I can do to help you," and then to divert him by conversation on other subjects. That rancor, ill-feeling and contention are, by methods such as these, rendered less common, and that through them the highest ideal of the relation of attendant to patient—that of companion, counsellor and friend—is realized, is beyond dispute.

"I have been doing ——— a great injustice," said a member of the training school to me recently. "He is what I called stubborn and contrary in everything; and although, of course, I I knew he was insane, I thought he acted that way because it was natural for him, and that he resisted so much because he had always been contrary. I have become at times vexed and provoked with him, and am satisfied that I have not treated him with the consideration which I should. I have not been harsh, but hasty and inclined to scold, and held him in a measure accountable for his conduct. Since your lecture of yesterday on Forms of Disease I can see that the reason why he resists doing things which he is requested to, is because of delusions, and because effort of any kind is wearing upon him and distressing to him. I believe cases of this kind should be better understood: that the attendant should know the reason why his patient's conduct is such as it is. It makes matters easier all round, and I am satisfied that I shall have much more toleration for the peculiarities of patients in future, because I know more about why they do disagreeable things, and don't act in a reasonable way."

Caution, prudence, coolness and quickness of perception—all so necessary to meet the emergencies encountered in dealing with the insane—are increased by mental training. Under the most careful management the suicidal patient will occasionally elude vigilance and find some means for the execution of his purpose. What happens in the case of one found hanging, for example? If an inexperienced attendant discovers that this accident has occurred, he is too often paralyzed through mental shock, or his first impulse is to fly. As in one case which came under my personal knowledge, the attendant was powerless to act, being overwhelmed by the terror which the dreadful sight occasioned. On the contrary, what took place in a similar case under the management of a training school graduate? A patient found hanging to his door-hinge by means of a mattress wire was promptly lifted down from this

perilous position. The attendant retained perfect coolness and composure. Did he send for the medical officer, in the meantime acting a passive part himself? Not at all. He dispatched help for the physician; and although the lungs had ceased to act and the patient's life was nearly extinct, he was able to apply artificial respiration so successfully that by the time the doctor arrived upon the scene, respiration was re-established and the danger passed. How comforting and satisfactory the feeling to those who had taken the pains to supply the information which permitted this to be done. On the contrary, how replete with humiliation and self-reproach the mental review of the first-named case. How the thought obtrudes itself, that in failing to give the training necessary to meet such an emergency, we share accountability for the melancholy result.

In the matter of hall cleanliness and hall decoration favorable results follow instruction in surgical and hygienic principles and cultivation of the æsthetic sense. Cleaning is looked upon as less a drudgery when its hygienic importance is apprehended. It then becomes asepsis and acquires a new dignity. Attention to patients, to their physical needs and to their personal appearance is less onerous and burdensome when the attendant realizes that in so simple a matter as adjusting a tie, or sewing up a rent, he is participating in the moral treatment of the patient and supplying an aid to recovery. Beautifying and ornamenting halls is a labor of pleasure when the high psychiatrical purpose, the appeal to the æsthetic sense, the supplying healthful psychical stimulation, and the introduction of pleasant mental impressions are appreciated at their value. The attendant, realizing that in substituting order and neatness for untidiness and disorder he is furnishing a direct aid to recovery, feels the work of personal attention less onerous and appreciates to a greater extent than ever before the importance of the factor which his work supplies. With the distinct idea in view that a motive to self-control even though operating effectually for but a brief period of time at first may eventually become a stepping-stone to self-control of an habitual and permanent character, he is led to encourage attendance upon entertainments and chapel services, and to avail himself of every means to supply such motives as may tend to restoration of complete ascendency of the will.

Second.—The more general dissemination of correct information regarding the nature and treatment of mental disease.

There are being constantly sent from hospitals for the insane trained attendants, who for one reason and another leave the service to take up other avocations. Many engage in the work of private nursing and the care of insane patients in their homes, lead useful lives, and are the means of alleviating a vast amount of suffering. In addition to the services of this class, however, the community at large derives benefit from the experience in the management of the insane of those who are engaged in other employments. Their knowledge of the why and the wherefore pertaining to mental disease; their ability to discriminate in a measure between forms of insanity; their practical and theoretical acquaintance with the management of patients, will render them of much assistance in cases of insanity occurring in their neighborhoods. Their services will from time to time be called into requisition in the temporary management of cases at home, and their asylum training will render this service skilled and intelligent. It happens, occasionally, that patients are unnecessarily transferred to an institution because of failure to correctly estimate a case, or because of inability on the part of friends to supply the proper aids to recovery. A skilled attendant, under competent medical advice, can here be of assistance, and it will be found in future years that the asylum training school has accomplished an efficient and very important work in supplying knowledge which may be made available in the treatment of patients at home. As Dr. Cowles well says: "It should be understood that it is regarded here as a part of the duty of the asylum to the public, which it was created to serve, to qualify young women and men to be nurses with special fitness for the home treatment of patients in cases of nervous disease, or of impending or confirmed mental disorder."

Third.—Emphasizing the importance of general nursing in the management of the insane.

Teaching the physical basis of morbid mental manifestations, retires so-called "mental disease" to obscurity. In the contemplation of insanity as symptomatic of disturbed or perverted brain action, a distinct advance occurs in the lay mind. The attendant in looking upon insanity from this point of view, perhaps for the first time realizes the importance of applying to its treatment those measures adapted to bodily illness in general. In insanity to as great extent as in any other illness is skilled nursing important. Indeed, the difficulties encountered by the nurse are

perhaps greater in cases of delirious excitement, than in any other illness. The element of resisting, of opposing necessary attentions, is here to be overcome.

To say nothing of the incalculable advantage to the patient of skilled nursing, the information derived from careful observation of symptoms, and the confidence growing out of the judicious application of remedies are of the highest value to the medical officer. With this support he feels more than ever a sense of courage and fearlessness, and prescribes with the perfect assurance that his prescription will be intelligently followed. He knows, for example, if it becomes necessary to administer a hot bath, that every precaution will be taken: that sufficient help will be present to prevent accident, that the temperature of the water will be ascertained previous to the patient's immersion, and that any untoward symptoms developing in consequence of the remedy, or incident to its application, will be promptly recognized and reported. The physician will frequently have occasion to prescribe an enema for an excited patient. The delicate duty of administering it may, in the hands of the inexperienced, be clumsily performed. It may result in injury, and too frequently will, if not carefully given, fail of the purpose for which it was prescribed. The trained attendant, however, having in mind the importance of ascertaining the temperature of the enema, knowing the anatomical relations of the parts, realizing the impediment which an overloaded rectum will offer to the insertion of the syringe nozzle, understanding the position of the patient which will favor successful introduction and retention of the enema, and having all the details of the work in hand, will accomplish his object without injury to the patient and without intensifying his excitement by misdirected exhibition of force or bungling manipulation.

If, as is the case sometimes with operative procedures however simple, untoward symptoms do develop, and accidents arise which cannot be foreseen or prevented with the exercise of ordinary judgment and skill, what a relief for the physician to feel that the unfavorable outcome of the operation was in no way attributable to him for failure to impart the necessary instructions as to its details.

Dr Cowles remarks in this connection: "There is another important reason for giving every nurse as broad a training as possible in the general principles and practice of all nursing; just as the physician should receive a general education in the profession

of medicine before he limits himself to a specialty. The danger and evil of all asylum work is routine practice—limitation to one line of observations—to the neglect of bodily diseases in general. It is true that the majority of the population of all asylums is in various stages of dementia. It may be true also that, as an eminent alienist says, 'not only the nurses but the medical staff suffer from a tendency to the lowering of mental tone because of the constant association with defective minds.' To counteract such tendencies everything possible should be done to amplify the hospital idea in the work. The teaching of bodily nursing in a training school excites the interest not only of the nurses, but of the medical staff in all the manifestations of bodily disorders that can be found, and lends value to the practical care of all morbid conditions. Routine and monotony kill interest when the aim is not beyond the simple care of many incurables. This is the bane of asylum work."

Fourth.—It is probable that training schools have been productive of good by lengthening the service of attendants; although this is difficult of demonstration. The following tabulation will be found of interest in this connection:

NAME OF INSTITUTION.	STATE OR PROVINCE.	Date of organization.	Number of graduates.	Number of graduates still in the employ of the institution.	Number of graduates in asylum or institution work elsewhere.	Number of graduates engaged in private nursing.	Number of graduates engaged in general hospital service.
McLean Hospital	Massachusetts.	1882	116	20	4	44	14
Buffalo State Hospital	New York.	1884	67	14	3	20	4
Essex County Asylum	New York.	1886	32	7	2	9	.....
Kankakee Asylum	Illinois.	"	130	60	5	3	.....
Willard State Hospital	New York.	1887	42	22	.....	.....	.....
Kingston Asylum	Ontario.	1888	16	8	1	.....	1
Middletown Hospital	New York.	"	35	26	.....	2	.....
Danvers Asylum	Massachusetts.	1889	13	7	.....	1	.....
St. Peter's Asylum	Minnesota.	"	39	30	1	1	.....
Westboro Asylum	Massachusetts.	"	14	4	1	8	.....
Rochester Asylum	Minnesota.	"	17	14	.....	2	.....
Independence Asylum	Iowa.	"	24	20	3	.....	.....
Utica State Hospital	New York.	1890	59	41	2	.....	.....
Rochester State Hospital	New York.	"	27	26	.....	.....	.....
Eastern Michigan Asylum	Michigan.	"	21	14	1	.....	.....
St. Lawrence State Hospital	New York.	1891	.....	.....	.....	.....	.....
Michigan Asylum for the Insane.	Michigan.	"	.....	.....	.....	.....	.....
Cleveland Asylum	Ohio.	"	.....	.....	.....	.....	.....
Toronto Asylum	Ontario.	"	.....	.....	.....	.....	.....
Total			652	313	23	90	19

FOOT NOTE.—The following institutions have lectures and courses of study, but have not regularly organized training schools, and do not issue diplomas: Retreat for the Insane, Hartford, Ct.; Western Pennsylvania Hospital, Dixmont; Central Indiana Hospital, Indianapolis; Asylum for the Insane, Hamilton, Ontario; State Hospital for the Insane, Warren, Pa.

It will be seen from the foregoing that a large percentage of training school graduates remain in asylum work, and the showing in respect to the number engaged in private nursing, and in the work of general hospitals is peculiarly gratifying. Assuming, however, as has been alleged, that the training school does not promote permanency of service in asylums, it has still done great good in the lines indicated in the foregoing pages. To quote from the remarks of Trustee Baldwin at the first graduating exercises at the Eastern Michigan Asylum:

"The time employed by you in this undertaking has not been lost time. The knowledge you have acquired is more estimable than silver or gold; it can never be taken from you; it is a fountain from which you can continuously draw without reducing the quantity—in fact, the more you use it, the more it will accumulate, the more valuable it becomes. It is such as every head of a family ought to possess—every intelligent man or woman in the land—yet, here, you have acquired it without loss of time, without expense. You have vastly increased your usefulness, and laid deep the foundations and opened wide the door for future acquisitions."

A word as to the field of study in connection with asylum training schools. In the majority enumerated above there are taught anatomy, physiology and hygiene, general nursing, surgical nursing, obstetrical and gynæcological nursing, mental physiology and pathology, including the management of the insane, emergencies, the principles of sanitation, sepsis and antisepsis, physical culture, massage, the preparation of special diet and cooking for the sick. Certainly a broad foundation is laid for usefulness in instruction of this character.

ON THE INCREASE OF INSANITY.*

BY W. J. CORBET,
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Mr Chairman, Ladies and Gentlemen:

The invitation with which I have been honored, to visit the World's Columbian Exposition as a member of the International Congress of Charities, Correction and Philanthropy, and to contribute a paper on the insane, is most highly appreciated by me.

Finding it impossible to attend in person, I willingly respond to the latter part of the invitation.

As one who has devoted much time and attention, under peculiarly favouring circumstances, to the study of the statistics of insanity, and being impressed with the fact that the malady is increasing at a rapid rate, it seems to me that no more fitting time or opportunity could arise for drawing attention to so grave and serious a social problem than this which is offered by the great International Congress now assembled in the magnificent city of Chicago, a city which has drawn within itself the products of civilization, from every clime, to an extent never before equaled, and where at this moment the mental powers of mankind, the genius and intellect of the human race, are represented more fully than in any other place upon the earth.

Writing in the *Fortnightly Review* of January last, on the increase of insanity, I expressed the hope that, in the event of failing to impress its importance on the English Official Mind "a conference outside offical circles should be held by qualified independent and disinterested men to consider the subject." At that time I had no thought of how wide and far reaching a platform was about to be provided for the discussion, or how soon my humble efforts to bring it on were to be rewarded with success. It may be taken for granted that the public at large have little knowledge, unless in a vague and general way, of the extent to which insanity prevails, or of the extent to which the care and proper custody of the insane has been studied, investigated, discussed and written about during the last half century. The subject is in itself so painful and uninviting that only philanthropists, specialists and official persons take much

* Read at the International Congress of Charities, Correction and Philanthropy (Section IV, on the Commitment, Detention, Care and Treatment of the Insane), Chicago, Ill., June 12-18, 1893.

interest in it. The general public, from natural repugnance, avoid the distressing topic. Madness, be it in the individual, the family or the multitude, is so full of affliction that everyone not immediately concerned, either philanthropically or otherwise, with the care, custody, or supervision of the insane, wishes to pass it by, to hide it, to cover it up, and, if possible, to put it away out of sight and out of mind altogether. Hence, as just said, few people have any comprehensive knowledge of the facts, or of the enormous amount of research latterly bestowed upon them. The field of inquiry is a dismal region from which most people turn away with feelings of fear and aversion wishing it to remain a *terra incognita*. The psychological aspects are said to be so inscrutable as to baffle the researches of the ablest and most profound scientists. But of this I am not qualified to treat, my only claim being to some knowledge of the statistics of insanity.

Before entering on the consideration of the two questions I propose to discuss, namely "The Increase of Insanity" and "Private Lunatic Asylums Kept for the Personal Profit of their Owners,"* I desire, in connection with the foregoing observations, to mention a few of the most remarkable books, with which I am acquainted, issued from the press in recent years by persons eminently qualified to write on lunacy.

The first perhaps in importance is entitled "Legislation on Insanity" a collection of all the lunacy laws of the States and Territories of the United States to the year 1883, inclusive, with the laws of England on insanity, legislation in Canada on private houses, and important portions of the lunacy laws of Germany, France, Belgium, Russia, etc. The work, which contains over 1,100 pages, is best described in the words of the learned author, George L. Harrison, LL. D., late President of the Board of Charities of Pennsylvania, in his preface: "This volume presents the facts and materials for a 'Comparative Anatomy' of almost all civilised legislation on this subject. Instead of a volume of reasonings and appeals, it lays before the community and throws in, the way of legislators a complete collection of the legislation of all our States and Territories, and of the most important legislation of England and other foreign countries in regard to the care of the insane."

* See Proceedings International Congress of Charities, Correction and Philanthropy, (Section IV, on the Commitment, Detention, Care and Treatment of the Insane), Chicago, Ill., June 12-18, 1893.

In my opinion the value of this volume as a book of reference on the laws of insanity can hardly be over-estimated, while the all too brief preface, or introduction, contains ample evidence, in the comments and suggestions, compressed within the short space of sixteen pages, of the profound knowledge possessed by the author and of his deep feelings of sympathy for the insane.

Doctor Frederick Norton Manning, of New South Wales who was commissioned by his government to visit the lunatic asylums of the world, with a view of introducing the most approved methods of housing and treating the insane into Australia, has given the result of his investigations in an exhaustive report of 300 pages, presented to the Colonial Legislature in 1868, which contains a large amount of varied information of the highest interest and value.

Another important volume also dates from New South Wales, entitled "Lunacy in Many Lands" published in 1888, twenty years after Doctor Manning's Report. It is compiled by Doctor G. A. Tucker, of Sydney, who devoted much time to visiting lunatic asylums in various countries. He has given his experiences in perhaps the most remarkable and comprehensive book ever written on the subject. Extending to over 1,500 pages, it contains as Dr. Tucker says, p. 1,564, "Every scrap of information collected during three years and a half visitation of lunatic asylums throughout the world." This enormous amount of matter is skilfully treated, admirably arranged and carefully indexed for easy reference. One other work I desire specially to name, which, although not devoted exclusively to lunacy, includes a valuable contribution on the subject. This important work, in five large volumes, namely "A System of Practical Medicine by American Authors," edited by William Pepper, M. D., LL. D., assisted by Louis Starr, M. D., was published in Philadelphia, by Lea Brothers & Co., in 1886. The fifth volume, which alone runs to over 1,300 pages, is exclusively devoted to diseases of the Nervous System and includes a special article on Mental Diseases by Charles F. Folsom, M. D. I have cited these works to indicate briefly the profound interest that has been, and is being, taken in the matter and to impress, if I can, upon the many the vital importance of the subject as evidenced by the immense amount of labour, time and thought bestowed upon it by the few; that is to say, by those who are aware of the gravity of the issues at stake and the necessity of doing all that human wisdom can devise, to arrest, if it can

be arrested, the spread of insanity, and to ameliorate as far as possible the condition of the insane.

First in point of order I take the increase of insanity. It is to be regretted that, so far as I am aware, no successful attempt has been made to get together a universal return of the insane throughout the world, at stated periods, so as to ascertain with some degree of accuracy the rate at which the increase of insanity has been proceeding generally. In the year 1874 I tried to collect materials for such a return. Circulars and printed forms (appended) were issued with that object. The Earl of Derby, then Secretary of State for Foreign Affairs, courteously consented to cause them to be circulated, through the Foreign Office, in the countries for which they were intended. In due course returns, more or less complete, were furnished from various countries in Europe and States in America.

The English Lunacy Commissioners, when applied to, did not seem disposed to encourage my inquiries and, as I have reason to believe through their interposition, an intimation was conveyed to me, from a quarter I was then bound to defer to, which prevented me from carrying my researches any further. Had my hand not been stayed an amount of valuable information, on the general statistics of insanity, not previously existent in concrete form, would probably have been collected. The attempt may be in the recollection of some of the members of this Congress as from some of the States of America, as well as from several European Countries, the returns asked for were kindly and promptly furnished. Owing, however, to their incompleteness, and to the fact that I was unable to carry out my inquiries to the end, it is not possible to use the fragmentary information received for the purpose of this paper. It may, nevertheless, be interesting to note that during the twenty years embraced in the partial returns furnished, namely, from 1853 to 1873, the actual numbers show a regular annual increase as if influenced by the natural law of Genesis. I refer to the incident now in the hope that some better qualified and more fortunate investigator may undertake the task which I failed to carry out to a successful issue.

Not having the necessary materials, therefore, at hand to enable me to summarize, in tabular form, the statistics of insanity at stated periods in other countries, I am forced to fall back upon the statistics for England, Ireland and Scotland, which may probably be taken to illustrate, with the help of such other information as we possess, at least approximately, what has been occurring through-

out the world in regard to the progressive increase of the malady.

Of the large actual augmentation of numbers the figures given from year to year on official authority leave no doubt whatever. The theory promulgated by the majority of the Lunacy Commissioners, with resolute persistency, in the face of facts and figures that should convince the most casual observer to the contrary, is that, apart from the increase proportionate to the growth of the population, the increase is only "apparent" and consists of the ingathering of pre-existing cases, which hitherto escaped official cognizance, and the prolongation of the lives of the chronic insane by reason of the greater care taken of them now than formerly. In using these statistics as an example of what is probably happening in other countries, it is only fair to let the Commissioners be heard in their own words, in this connexion, so that their respective views may be considered on their merits. The English Commissioners (15th Report, p. 75) say, "During the ten years from the 1st of January, 1849, to the 1st of January, 1859, the number of patients in the various asylums of England and Wales have advanced from 14,560 to 22,853; this increase has been principally in public asylums. In county and borough asylums the advance has been from 6,494 to 15,845, making an increase of 9,351; in lunatic hospitals from 1,195 to 1,992, making an increase of 857. The great increase which has taken place in the number of patients in asylums is limited almost entirely to pauper and criminal patients." The figures here given do not include workhouse lunatics 7,963, or 5,920 others located elsewhere.

In a table "showing the number and distribution of all reported lunatics" the total in England and Wales at this date, viz., in 1859, is put at 36,762. At that time, thirty-three years ago, the Lunacy Commissioners were evidently convinced of, if not alarmed at, the increase of numbers, and accordingly in the same report, (pp. 77, 84) they assign the following as the causes of what they all along insist on describing as "an apparent increase."

"1. To the more complete collection of annual returns, formerly very defective in this respect.

2. To the detection and registration of cases formerly left unnoticed.

3. To the removal of a larger proportion of patients, when they are exposed to causes of death, into asylums, favouring the prolongation of life.

4. To the effect of sanitary regulations in asylums, of improved

diet, and of various means of sustaining the health and promoting the longevity of the entire body of inmates.

5. To a like effect on those out of asylums, from the removal of large workhouses to more healthy sites, and from the medical visitation of such of the insane paupers as are in neither workhouses or asylums."

The great solicitude here shown by the Commissioners to account for, and minimize, the embarrassing "apparent increase" shows how seriously they would regard an actual increase if such had, in their opinion, taken place. It is to be noted that the five causes given by them for the augmentation, are reducible to three, namely, improved returns, prior to 1859, improved diet and improved sanitary regulations.

Note also that these influences were for some years previously in operation and must consequently have spent their force by drawing all, or nearly all, cases of lunacy existing at that time, within the scope of official cognizance, or, to put it perhaps more clearly, the limit of numbers would then have been reached and the ominous word "increase" which runs through the whole series of official reports from beginning to end, would cease. But what is the fact? Why this, that as shown in a table of figures, in the Commissioners' forty-sixth report, (pp. 7, 8, 9) the numbers have risen from that time to this by regular annual average increments of over 1,500 until they have reached the enormous aggregate at which they now stand, namely, 87,848.

Now as to Scotland, the Commissioners, who first entered on their functions in 1858, when the total number of insane under official cognizance stood at 5,748 following the lead given by their fellow Commissioners in England, attempt to explain the "apparent increase" in a similar way. In their Thirty-fourth Report (p. LVII) they say:

We have had since 1858 a net increase of 6,975 in the number of lunatics jurisdiction of the Board, or 120 per cent. The increase of the population during the same period has been only 38 per cent. They go on to say:

"1. That the increase of pauper lunacy is much beyond what would naturally result from the increase of population.

2. That it cannot be attributed to accumulation resulting from longer periods of residence of pauper lunatics in asylums.

3. That it is only in a very slight degree due to the lowering of the death rate.

4. That there is no reason for believing it to be due to an increased tendency to insanity in the community.

5. That it is not due to any one cause but to many causes operating with different degrees of force in different localities and under different social conditions."

This mode of accounting for an increase of 120 per cent. is rather oracular and leaves us more in the dark than ever. On a former occasion when the insane in Scotland had reached to little over one-half of their present numbers the Commissioners endeavoured to explain the "apparent increase" by an equally oracular utterance saying in their Fourteenth Report, that it was "ascribable to the growth of lunacy or at any rate to the increased numbers of lunatics in asylums."

Then as to Ireland. In the departmental report presented to Parliament for 1891 "The Inspectors of Lunatics" (I don't know why they are not designated Commissioners as well as the English and Scotch officials, their duties being identical in every way) having referred to the effects of emigration taking away the strong and healthy and leaving behind the weak and infirm to swell the numbers of the insane, proceed as follows, "hence it is safe to assume that the present number of the insane in Ireland properly belongs to a much larger population than that which now exists. However, making allowance for this cause, which tends to show an apparent increase of insanity, we are still driven by the facts before us to conclude that the large increase of lunacy has been absolute as well as relative." The Report goes on to say, "the rapid increase of insanity in the country, in the face of a diminishing population, ought therefore to engage the attention of all who take an interest in the social and material progress of Ireland, in order to ascertain how far such increase can be stayed by any means within the power of the State."

This is a highly important pronouncement and one, let us hope, that may not prove fruitless.

In a paper read, nineteen years ago, before the "Statistical and Social Inquiry Society of Ireland" I quoted from a report on the "Relation of Education to Insanity" by Doctor Edward Jarvis, of Dorchester, Massachusetts, which was embodied in the Report of the United States Commissioner of Education for 1871, as follows:

"The successive reports, upon whatever source or means of information procured, all tend to show an increasing number of the insane. In the United States, Great Britain, Ireland and other civilised nations, so far as known there has been a great in-

crease of provision for the insane within forty years and a very rapid increase within twenty years. Hospitals have been built seemingly sufficient to accommodate all the lunatics within their respective States, counties, or districts. These have been filled, and then crowded and pressed to admit still more. They have been successively enlarged, and then other institutions created, and filled and crowded as the earlier houses were." Doctor Jarvis has thus described with singular accuracy what has been taking place here. Since that time the insane, as will be seen from the tables given below, have all but doubled, and the cry is—still they come. In every successive Report of the Commissioners, concurrently with the increase of numbers, records of the erection of new asylums and of the enlargement of old are to be found. In the Forty-fifth Report (pp. 43, 44), having given a history of the additions, alterations and improvements in 1890, they say under the head of "Insufficiency of Asylum Accommodation," "The additions enumerated above have done something but not enough to meet the ever-increasing demand for asylum accommodation, which in several counties is yet very inadequate. That there should be a constant tendency towards deficiency, taking a general view of the country, is not surpising when we remember that the average annual increase in the lunatics treated in the County and Borough Asylums during the ten years ending 1st January, 1891, has been 1,368."

Under the same heading, in the next issue, they are still more emphatic. They say, "The pressure for asylum room, which in our last Report we mentioned as existing in so many counties, continues, we regret to say, in undiminished severity and we do not find that County Councils are more prompt than their predecessors who had the control of asylums in adopting measures of relief. We will notice in alphabetical order the counties in which the insufficiency of accommodation was, at the visitation of the past year, most apparent." They then enumerate over a score of counties and cities, including the city of London, in which the provision is still altogether inadequate, the existing asylums overcrowded, and the pressure for admission urgent. Their comments on the condition of the London district may be taken as an example of all the rest. They say, (Forty-sixth Report, p. 53) "The difficulty of finding accommodation anywhere for London patients to which we referred in our Report for 1890 continued to be felt last year in equal intensity: nor can we report now that any

further action has been taken by the London County Council to make the necessary permanent provision for the insane poor beyond advertising for an estate as a site for another asylum. The additions to Cane Hill are now available, but we believe the Claybury Asylum will require at least another year for its completion. These two extensions will provide for 2,800 patients, but there will be still left boarded out a sufficient number to fill another asylum of considerable capacity, while there can be little hope of any diminution of the annual increment of insane paupers for whom provision must be made."

I have written elsewhere on several occasions during the last twenty years pointing out that, account for it how we may, as time progresses, the stream of insanity broadens and deepens continually. The great central fact stares us in the face, it cannot be hidden, no effort of obscurantism can conceal it. The figures given from official records indisputably prove it. The ominous word "increase" is written large upon every page of the annual reports for the last forty years, and it is surprising how the commissioners apparently fail to see the significance of their own figures or of the emphatic language they themselves have used.

Through the favour of the "State Commissioners in Lunacy" New York, I have just received a copy of their third annual report, being for the year 1891, from which I gather that the same tendency to increase exists in America as with us. In Chapter 3 (p.209) it is stated that "in appropriations for the insane the State has never kept pace with the actual increase of its insane population."

On p.381, Chapter 29, it appears that the number of registered insane in the State on October 1st, 1891, was 16,648, a net increase over the preceding year of 642. I merely glance at this fact in passing, not having the means of ascertaining the circumstances elsewhere or whether the increase is general throughout the other States of America. But to return to my illustration. From what small beginnings the system has developed, during this century, into its present great proportions may be gathered from the fact that a return presented to Parliament in 1807 put the number of the insane then in England at 2,248, (Report of Commissioners, 1846). The Report proceeds: "The numbers became gradually better known, partly owing to individual inquiries, until the year 1827, when the ascertained number of pauper lunatics exceeded 9,000; whilst on the 1st day of January, 1847, the number returned was 18,814." This relates to England only.

With regard to Ireland, so insignificant were the numbers believed to be when the question of providing special asylum accommodation for the insane was first mooted, that the celebrated Dean Swift, under whose will the first lunatic asylum was established, by charter granted by George the Second in the year 1747, thought it doubtful whether a sufficient number of insane persons could be found to occupy the building, as appears from the following words of the charter: "And if a sufficient number of ideots (sic) and lunatics could not be readily found, he (Dean Swift) directed that incurables should be taken into the said Hospital to supply such deficiency; but that no person labouring under any infectious disease should be admitted into the same."

As regards Scotland the first report of the Commissioners was presented to Parliament in 1858, when the number then under official cognizance was 5,748. But lest it might be thought I wish, in reviewing the movement of the insane, to minimise the original number by going back too far, and thus make the increase appear greater by contrast, the year 1862 will be the point of departure. The following tables show the development from that time to the present:

(TABLE No. 1.)

Date.	Country.	Number of insane under official cognizance.	Population at large.	Ratio of insane per 1,000.	Actual increase of numbers in each decade.*
1862	England,	41,129	20,336,476	2.02	
	Ireland,	8,055	5,798,967	1.36	
	Scotland,	6,341	3,062,294	2.01	
	Total,	55,525	29,197,737	1.81	
1872	England,	58,640	23,074,600	2.54	17,511
	Ireland,	10,767	5,368,696	2.04	2,712
	Scotland,	7,606	3,399,226	2.27	1,265
	Total,	77,013	31,842,522	2.41	21,488
1882	England,	75,072	25,798,922	2.90	16,432
	Ireland,	13,444	5,294,436	2.54	2,677
	Scotland,	10,355	3,695,456	2.80	2,749
	Total,	98,871	34,788,814	2.84	21,858
*1891	England,	87,848	29,403,346	3.01	12,776
	Ireland,	16,689	4,704,750	3.54	3,245
	Scotland,	12,799	4,025,647	3.17	2,444
	Total,	117,336	38,133,743	3.07	18,465

* The figures for 1891 embrace a period of nine years only, the figures for 1892, to complete the decade, not being yet available.

This table of figures shows how the fixed stock of the insane at the end of each decade had risen by thousands, while the ratio of the insane to sane rose at the same time from 1.81 to 2.41-2.84 and 3.07. The following table shows that concurrently with this augmentation the admissions, discharges, and deaths, have gone on increasing in proportion, while the increase of expenditure has fully kept pace with the increase under every other head. For shortness I compare the figures of 1862 and 1891 as an illustration, combining the Returns of England, Ireland and Scotland together.

(TABLE No. 2.)

	1882	1891	Increase in 10 years.
Admissions	18,862	23,091	4,229
Discharges	12,630	14,946	2,316
Deaths	6,133	8,300	2,167
Total	18,763	23,246	4,483
Cost of Maintenance	£2,491,685	£3,069,870	£578,685
Cost of land and buildings to 1878 and 1888 respectively, extracted from Returns ordered by Parliament	1878	1888	Increase for land and buildings in 10 years.
	£9,603,231	£15,250,435	£5,647,204

Now as to the cause, or causes, of the accumulation of numbers. No doubt increased asylum accommodation, improved methods of obtaining returns, improved sanitary regulations in asylums, improved dietary and other means of sustaining health and promoting longevity, together with the attraction of the State Grant in aid, account for what may be quite properly described as an "apparent increase" or an ingathering of pre-existing cases. But these causes were terminable, they exhausted themselves, more or less many years ago; yet the annual increment continues not only undiminished but ever increasing in volume. For some years the Commissioners have suspended the publication of the assigned causes of insanity and I am therefore unable to give the figures. I can say, however, from other data, that hereditary influence largely predominates over all other exciting causes.

In Doctor Charles F. Folsom's article on Mental Diseases, printed in volume V of the work already mentioned, it is stated (p. 113): "Among the predisposing causes heredity includes nearly or quite 75 per cent. of all cases and is easily first; in considering which, not only the immediate parents are to be taken into account, but also

the collateral branches, grand-parents, uncles, aunts, sisters, brothers, and cousins, for hereditary insanity often skips one generation and even appears sometimes first in the child, and then later in the parent." On this point I may be permitted to quote another name whose authority will hardly be disputed. Darwin (Descent of Man, Vol. I. pp. 110, 111), says, " I have elsewhere so fully discussed the subject of inheritance that I need here hardly add anything. A greater number of facts have been collected with respect to transmission of the most trifling, as well as of the most important characters in man than in any of the lower animals; though the facts are copious enough with respect to the latter. So in regard to mental qualities, their transmission is manifest in our dogs, horses, and other domestic animals. Besides special tastes and habits, general intelligence, courage, bad and good temper, etc., are certainly transmitted. With man we see similar facts in almost every family; and we now know through the admirable labours of Mr. Galton that genius, which implies a wonderfully complex combination of high faculties, tends to be inherited; and on the other hand *it is too certain that insanity and deteriorated mental powers likewise run in the same families.*" The italics are mine.

If time permitted, quotations might be multiplied to any extent to prove that insanity is transmitted from generation to generation. The writings of such eminent scientists as Esquirol, Morel, Moreau, Forbes-Winslow, Bucknill, Maudsley, Tuke, and numerous others contain overwhelming evidence of the sad truth. As shown on Table No. 2, the discharges from the lunatic asylums of England, Ireland, and Scotland taken together, reach near to 15,000 in a single year. The exact figures for 1891 are 14,946 as against 12,630 in 1882. The total numbers of persons of all classes discharged recovered and not recovered, in ten years, namely, from 1882 to 1891 inclusive, reach the enormous aggregate of 133,195.

These are stupendous figures—taken in connection with the established fact of hereditary transmission they shed a lurid light on the progressive increase of insanity. Could the history of these hundred and thirty-three thousand persons be traced, or of the hundreds of thousands discharged between 1852 and 1882, it doubtless would be found that most of them were merged again in the general body of the community. That the married resumed their positions, that many, perhaps a majority, of the single, entered

the matrimonial state, and very likely led blameless and useful lives to the end of their days. But what of posterity? Has the inexorable law of heredity asserted itself? Have the children of such parents been insane, or, in turn become the parents of lunatics? I am afraid the question, in the majority of cases, must be answered in the affirmative. It is only necessary to glance at the conditions under which the insane existed, or rather pined away and died, some fifty or sixty years ago, for a solution of the problem of increase by heredity. Referring to the "enormities" existing in public as well as in private asylums previous to 1827, the Commissioners in their report for 1846 say they comprised "Almost every species of cruelty, insult, and neglect to which helpless and friendless people can be exposed when abandoned to the charge of ignorant, idle and ferocious keepers acting without conscience or control."

In Wynter's Curiosities of Civilization, when contrasting the treatment of the insane in past times with that which is adopted at present, he says: "Supposed to be degraded to the level of beasts, as wild beasts they were treated. Like them, they were shut up in dens, littered with straw, exhibited for money, and made to growl and roar for the diversion of the spectators who paid their fee. No wonder (he adds) that Bedlam should have become a word of fear: no wonder that in popular estimation the bad odour of centuries should still cling to its walls, and that the stranger, tempted by curiosity to pass beneath the shadow of its dome, should enter with sickening trepidation. But now, instead of the howling madhouse his imagination may have painted it, he sees prim galleries filled with orderly persons. Scenes of cheerfulness and content meet the eye of the visitor as he is conducted along well-lit corridors, from which the bars and gratings of old have vanished. He stops, surprised and delighted, to look at the engravings of Landseer's pictures on the walls, or to the busts on the brackets. He beholds tranquil persons walking around him, or watches them feeding the birds which abound in the aviaries fitted up in the depths of the ample windows."

This description of the modern public asylum applies equally to all countries with which I am acquainted.

From the nature of the treatment the insane were subjected to in the earlier half of the century, longevity was out of the question, recovery all but impossible, they died and the danger of hereditary

transmission died with them. Since the period just referred to the change in everything relating to the care and treatment of the insane has been marvellous. Asylums furnished with every modern appliance for convenience, comfort and even luxury, have been provided. Amusements, theatricals, concerts, in-door and out-of-door occupations, everything, in short, that sympathy for human suffering could suggest, has been generously provided at an enormous, and annually increasing, expenditure of public money, to replace the evil system of former days. Concurrently with this beneficent change, the cure of the malady has received no less attention than the kindly treatment of the patients. Speaking at a meeting of the Medico-Psychological Association in London twenty years ago, the President in the course of his address said, "The special aim of the physician is to heal disease, not merely to care for the incurable. The most diligent heed to one duty will not excuse neglect of the other. Let your journal bear witness that this society has neglected neither. It teems with new remedies and new combinations of those that are old. During the last ten years many drugs have been added to the pharmacopoeia, and the experience of every year adds to our knowledge of their efficiency." It is a sad reflection that the outcome of all these beneficent efforts and designs is a continuous annual increase of lunacy in these kingdoms.

That intemperance is only second to heredity as a cause of crowding our lunatic asylums with inmates should not be left unnoticed. On a former occasion I drew special attention to this phase of the question making use of the Budget Speech of Mr. Goschen, Chancellor of the Exchequer in 1890, to show the enormous proportions of the drink bill and how its evil effects are felt. He said, "The £2,500,000 of excess of revenue of which I have spoken have been due to an extraordinary rush to alcohol;" pointing out how the receipts from useful and necessary articles of consumption, tea, coffee, etc., did not come up to the estimates, he continued: But when you come to alcoholic drinks, I frankly admit there is a very different tale to tell. The net receipts from all alcoholic drink is £29,268,000." (That is $140,486,400). What must the deluge of drink be when the mere tax upon it annually reaches to such a prodigious sum! Mr. Goschen went on: "The committee will notice that this consumption has been universal. Some have rushed to the beer barrel, others have rushed to the spirit bottle, and others to the decanter. All classes seem to have combined in toasting the prosperity of the coun-

try, and have largely increased the revenue," a sally received by the House with loud laughter. Mr. Goschen, however, felt the terrible significance of what he rightly called "These stupendous and sensational figures" observing, it was a circumstance "which must be deplored by almost everyone for many reasons, and which places upon the Government and upon the House an increasing liability to deal with the question of the consumption of alcoholic drinks." Three years have since passed, but nothing has been done. The alcoholic brain-poisoning goes on just as before, contributing its thousands of victims annually to swell the population of lunatic asylums, prisons, and poor-houses, to add to the seething mass of the morally depraved, and to increase the general death-rate of the kingdom.

In closing, I desire to say that inasmuch as the conclusions at which I have arrived unfortunately differ very widely from those of the official authorities in England and Scotland, though not in Ireland, and as I have dealt unreservedly with what I consider to be erroneous opinions and false deductions; it is only just to state that the vast improvement of the lunatic asylum system is entirely due to the unwearied exertions of the lunacy departments in these Kingdoms persevered in through a long series of years. Two of the most earnest reformers and resolute workers forfeited their valuable lives in the discharge of public duty. Doctor Francis White, for many years head of the Irish Lunacy Department met his death through a railway accident while on a tour of inspection; and Mr. Lutwidge, an English Commissioner, was stabbed to death by a criminal lunatic at Fisherton House Asylum. I wish to add, that the efforts of the departments have throughout been well seconded by the medical officers connected with the various public asylums, many of whom are men of high professional attainments.

TROPHO-NEUROSES IN THE INSANE.*

BY FRANK C. HOYT, M. D.,
Superintendent Iowa Hospital for the Insane, Clarinda, Iowa.

Gentlemen:—The title of my paper is to some extent misleading, in that I do not wish to consider all or nearly all of the trophoneuroses observed in cases of insanity, but will confine my remarks to only one of these interesting and important phenomena. In asking your attention to this subject, I disclaim any intention to present a discourse of literary or scientific merit, but desire to add the slight influence of my pen, toward taking from the list of inflammatory diseases of the cerebral meninges a lesion which I believe to be due primarily to trophic lesions, and not inflammatory in character.

During a series of investigations, which I conducted while pathologist in an insane hospital, I was struck with the frequent and almost constant evidence of vascular disease, observed in the brains of the chronic insane. My observations were largely confined to the study of cases such as senile and terminal dementia, alcoholic insanity and general paresis, and the findings present a uniformity which, to say the least, is striking. The frequent occurrence of the condition commonly known as internal hæmorrhagic pachymeningitis, the almost constant presence of dilated, varicose and diseased meningeal vessels, the dilatation and engorgement of the peri-vascular spaces, the opaque, infiltrated and thickened pia-arachnoid were all significant to me of grave disturbance of the vaso-motor system.

The dura-mater, pia-arachnoid, meningeal vessels, and when present, the various layers of false membranes found in hæmatoma, were preserved in all cases and subjected to careful preparation and thorough microscopical examination. The object which I had in view when the investigation was commenced, was the study of the internal layer of the dura-mater in the cases of pachymeningitis hæmorrhagica interna. Following the teaching of many leading authors, I expected to find this membrane presenting abundant evidences of a chronic inflammation. In this I was disappointed; for in the majority of cases, after many sections had been examined, I failed to find the slightest evidences of inflammation. In a few instances, in which adjacent to the dura-mater were false mem-

* Read at the Annual Meeting of the American Medico-Psychological Association, at Chicago, Ill., June 6-8, 1893.

branes evidently the result of remote hæmorrhages, patches of inflammation were observed on the inner surface of the dura. At those points organic union between the false and normal membranes had occurred, due, undoubtedly, to the irritation caused by the neomembrane. Failing to find sufficient evidence of disease of the dura-mater to account for the condition, I directed my studies to the pia-arachnoid and its vessels.

This membrane I found presenting, as a rule, marked evidence of vascular and structural disease, and on examining sections containing blood vessels of fair size, the pouched, distended, tortuous and generally diseased vessels were significant. Could I have found in connection with hæmatoma duræ evidences of a general inflammation of the internal dura, and unattended with both microscopical and gross signs of a general disease of the vessels of the pia-arachnoid, I would not have been led to doubt the theory of primary inflammation of the dura mater, advocated by Virchow, Ziegln, Charcot, Gowers, Delafield and others; but, on the contrary, my own observations led me to the school which teaches that the condition is primarily hæmorrhagic, and the results of my investigations were corroborative of the theory held by Huguenin, Sperling, Wiglesworth, Dercum, etc., in so far that inflammation of the dura mater is not an essential part of the disease. The advocates of this latter theory, with almost one accord, agree that the dura mater furnishes the primary hæmorrhage, the causes assigned for the hæmorrhage being diverse. If we take into consideration the anatomical fact that the dura mater is composed of two layers, made up of connective tissue bundles, and elastic fibres, and that the outer layer is the most vascular portion of the membrane, while the lower carries comparatively few vessels, it seems to me illogical to look to this membrane for the source of the hæmorrhage.

Further than this, while it is claimed by some writers that the thin walls of these vessels render them more prone to rupture, yet these vessels ramify in a dense tissue which assuredly gives support compensatory to the thinness of their walls.

It appears to me more reasonable then to free the dura mater from all implication in the matter, and look beneath to the pia-arachnoid for the source of the hæmorrhage. A thin diaphanous membrane, composed of a trabecula of connective tissue, carrying nerves, thin-walled blood vessels and lymph spaces, is more liable to rupture and pour its blood into the sub-dural space than the vessels of

the dense membrane above. Corroborative evidence in favor of this view is found in the almost constantly diseased condition of the vessels of the pia-arachnoid in those forms of insanity which give to us the greater number of cases of pachymeningitis.

In October of 1891, at the annual meeting of the Mississippi Valley Medical Association, I presented a paper in which I reported a number of cases of so-called pachymeningitis hæmorrhagica, reviewed the literature of the subject and stated as a result of my studies on the subject that I believed the theory of primary extravasation to be the most tenable position. In placing the source of the hæmorrhage in the vessels of the pia-arachnoid, I took a position not in accord with the authorities on the subject, and my paper has been subjected to some adverse criticism.

Sine that time I have had an opportunity to study a number of similar cases, and I am more than ever convinced that the disease is not of dural origin at all, and that the theory of pia-arachnoidean hæmorrhage is correct.

Late writers, notably Dercum, Spitzka and several others, while attributing the hæmorrhage to the dura-mater, teach that the hæmorrhage is by diapedesis or actual rupture, and the lesion is due to neuro-angio-paralysis, or some grave trophic disturbance affecting the integrity of the cerebral vessels. This is, without doubt, the correct theory, and explains very satisfactorily the hæmorrhage from the diseased vessels of the pia-arachnoid. In the *Alienist and Neurologist* for January, 1893, appeared an able article by Dr. E. D. Bondurant, of the Alabama Insane Hospital, in which he reports eight cases of hæmatoma durea.

Of his cases, one was an instance of recent subdural hæmorrhage, four presented false membranes with recent effusion of blood; two a pseudo-membrane without evidence of recent hæmorrhage, and in one there was extravasation of blood in the meshes of the pia. In only one of his cases were any signs of inflammation of the dura-mater observed, and in this case there was a false membrane of long standing which the writer very correctly believes produced the dural inflammation by irritation. He states that in his cases, "no anatomical appearance not readily explicable upon the hypothesis of a primary hæmorrhage was discovered in any of the cases; and no necessity for invoking the aid of an inflammatory process, least of all an inflammatory process in a structure having apparently as little to do with the case as the dura-mater." He agrees that the disease is of pial

origin, due to vaso-motor disease and non-inflammatory in character.

The arguments in favor of the vaso-motor origin of the disease are strengthened by the generally well recognized fact that cases of hæmatoma duræ are almost if not invariably found in company with abundant evidences of disease of the cerebral vessels. Since hæmatoma auris, or the insane ear, has been recognized as a primary hæmorrhage due to neuro-angio-paralysis instead of being due to a traumatic or idiopathic perichondritis, a strong analogy between the two conditions can be traced. As the lesion occurs in just such cases as furnish us our examples of acute decubitus, visceral hæmorrhages, corneal ulcers and other grave nutritive disturbances of undoubted vaso-motor origin, it is but a mere step to place sub-dural hæmatoma in the list of trophic lesions. To regard it as an inflammation of the dura-mater is not in accord with the post-mortem findings in a large number of autopsies, and I am impressed with the belief that inflammation of the dura-mater when found in cases of sub-dural hæmatoma, is secondary to the hæmorrhage.

The proposition which I submit, that the hæmorrhage is primarily due to disease of the vessels carried by the pia-arachnoid, and secondarily by rupture of newly formed vessels demonstrated in the neo-membranes, is of course not proven. However, I trust that the evidence furnished by my own cases and those of other observers will at least create a doubt as to the origin of the affection, and lead to more extended research on the subject.

PROCEEDINGS OF THE AMERICAN MEDICO-PSYCHOLOGICAL ASSOCIATION.

The forty-ninth annual meeting was held at Oriental Hall in the Masonic Temple, Chicago, Illinois, June 6–8, 1893.

The following members were present:

Adams, G. S., M. D., Westborough Insane Hospital, Westborough, Mass.
Allen, H. D., M. D., Invalids' Home, Milledgeville, Ga.
Allison, H. E., M. D., Matteawan State Hospital, Fishkill Landing, N. Y.
Andrews, J. B., M. D., Buffalo State Hospital, Buffalo, N. Y.
Archibald, O. W., M. D., North Dakota Hospital for the Insane, Jamestown, N. Dakota.
Bancroft, C. P., M. D., New Hampshire Asylum, Concord, N. H.
Bannister, H. M., M. D., Chicago, Ill.
Beemer, N. H., M. D., Assistant Superintendent, Asylum for the Insane, London, Ont.
Blackford, Benjamin, M. D., Western Lunatic Asylum, Staunton, Va.
Blumer, G. Alder, M. D., Utica State Hospital, Utica, N. Y.
Bourque, E. J., Longue Pointe Asylum, Montreal, P. Q.
Brooks, H. J., M. D., Elgin, Ill.
Brown, J. R., M. D., Indianapolis, Ind.
Burnet, Anne C., M. D., Manitowoc, Wis.
Burr, C. B., M. D., Eastern Michigan Asylum, Pontiac, Mich.
Burrell, D. R., M. D., Brigham Hall, Canandaigua, N. Y.
Campbell, Michael, M. D., Eastern Hospital for the Insane, Knoxville, Tenn.
Carriel, H. F., M. D., Illinois Central Hospital, Jacksonville, Ill.
Clarke, C. K., M. D., Asylum for the Insane, Kingston, Ont.
Clarke, F. H., M. D., Eastern Lunatic Asylum, Lexington, Ky.
Clark, Daniel, M. D., Asylum for the Insane, Toronto, Ont.
Cook, G. F., M. D., Oxford Retreat, Oxford, Ohio.
Crumbacker, W. P., M. D., West Virginia Hospital for the Insane, Weston, W. Va.
Curwen, John, M. D., State Hospital for the Insane, Warren, Pa.
Dewey, Richard, M. D., Chicago, Ill.
Daniels, Frederick H., M. D., Bellevue Place, Batavia, Ill.
Drewry, W. F., M. D., Central Lunatic Asylum, Petersburg, Va.
Duquet, E. E., M. D., Longue Pointe Asylum, Montreal, P. Q.
Eastman, B. D., M. D., Kansas State Insane Asylum, Topeka, Kansas.
Edwards, W. M., M. D., Michigan Asylum, Kalamazoo, Mich.
Evans, Silas, M. D., High Oaks Sanitarium, Lexington, Ky.
Everts, Orpheus, M. D., Cincinnati Sanitarium, College Hill, Ohio.
Eyman, H. C., M. D., Cleveland Asylum for the Insane, Cleveland, O.
Field, Matthew D., M. D., 115 East 40th St., New York City.

Fisher, Theodore W., M. D., Boston Lunatic Hospital, Boston, Mass.
Fuller, D. H., M. D., Assistant Physician, McLean Hospital, Somerville, Mass.
Gilman, H. A., M. D., Hospital for the Insane, Mt. Pleasant, Iowa.
Gorton, W. A., M. D., Butler Hospital, Providence, R. I.
Gundry, R. F., M. D., The Richard Gundry Home, Catonsville, Md.
Hall, John C., M. D., Friends' Asylum, Frankford, Philadelphia, Pa.
Hallock, W. B., M. D., Cromwell Hall, Cromwell, Conn.
Hancker, W. H., M. D., Assistant Physician, Delaware State Hospital, Farnhurst, Delaware.
Harmon, F. W., M. D., Longview Asylum, Carthage, Ohio.
Hill, Charles G., M. D., Mount Hope Retreat, Baltimore, Md.
Hill, G. H., M. D., Hospital for the Insane, Independence, Iowa.
Howard, E. H., M. D., Rochester State Hospital, Rochester, N. Y.
Hoyt, B. H., M. D., Second Hospital for the Insane, Spencer, W. Va.
Hoyt, Frank C., M. D., Hospital for the Insane, Clarinda, Iowa.
Hurd, Henry M., M. D., Johns Hopkins Hospital, Baltimore, Md.
Kilbourne, Arthur F., M. D., Rochester State Hospital, Rochester, Minn.
Lawton, S. E., M. D., Brattleboro Retreat, Brattleboro, Vt.
Long, O. R., M. D., Asylum for Criminal and Dangerous Insane, Ionia, Mich.
Mead, L. C., M. D., South Dakota Hospital for the Insane, Yankton, S. D.
Miller, J. F., M. D., North Carolina State Hospital, Goldsboro, N. C.
Mitchell, T. J., M. D., Mississippi State Lunatic Asylum, Jackson, Miss.
Murphy, P. L., M. D., North Carolina State Hospital, Morganton, N. C.
Orth, H. L., M. D., Pennsylvania State Lunatic Hospital, Harrisburg, Pa.
Page, C. W., M. D., Danvers Lunatic Hospital, Danvers, Mass.
Paine, N. Emmons, M. D., The Newton Nervine, West Newton, Mass.
Palmer, George C., M. D., Oak Grove, Flint, Mich.
Patterson, W. T., M. D., Aurora, Ill.
Powell, T. O., M. D., State Lunatic Asylum, Milledgeville, Ga.
Pratt, Foster, M. D., Kalamazoo, Mich.
Preston, John, M. D., North Texas Hospital for the Insane, Terrell, Texas.
Prieur, J. A., M. D., Assistant Physician, Longue Pointe Asylum, Montreal, P. Q.
Prince, L. H., M. D., 1348 N. Halsted St., Chicago, Ill.
Pusey, H. K., M. D., Central Kentucky Lunatic Asylum, Anchorage, Ky.
Richardson, A. B., M. D., Columbus Asylum for the Insane, Columbus, O.
Rogers, Joseph G., M. D., Northern Indiana Hospital, Logansport, Ind.
Reynolds, Thomas W., M. D., Assistant Superintendent, Asylum for the Insane, Hamilton, Ont.
Rowland, L. L., M. D., Oregon State Insane Asylum, Salem, Oregon.
Searcy, J. T., M. D., Alabama Bryce Hospital, Tuscaloosa, Alabama.
Smith, S. E., M. D., Eastern Indiana Hospital, Richmond, Ind.
Stearns, H. P., M. D., Hartford Retreat, Hartford, Conn.
Steeves, J. T., M. D., Provincial Lunatic Asylum, St. John, N. B.
Stone, B. W., M. D., Western Kentucky Lunatic Asylum, Hopkinsville, Kentucky.

Stone, W. A., M. D., Assistant Physician, Michigan Asylum, Kalamazoo, Mich.
Tobey, H. A., M. D., Toledo Asylum for the Insane, Toledo, Ohio.
Wagner, Charles G., M. D., Binghamton State Hospital, Binghamton, N. Y.
Wegge, W. F., M. D., Northern Hospital for the Insane, Winnebago, Wis.
White, F. S., M. D., State Lunatic Asylum, Austin, Texas.
White, M. J., M. D., Milwaukee Hospital for the Insane, Wauwatosa, Wis.
Wilson, R. S., M. D., State Lunatic Asylum No. 1, Fulton, Mo.
Wise, P. M., M. D., St. Lawrence State Hospital, Ogdensburg, N. Y.
Woodbury, Charles E., M. D., 13 Beacon St., Boston, Mass.
Woodson, C. R., M. D., State Lunatic Asylum No. 2, St. Joseph, Mo.
Young, R. E., M. D., State Lunatic Asylum No. 3, Nevada, Mo.

Also the following, who were invited to sit with the Association and to participate in the discussions:

John S. Colby, Samuel W. Hopkinson, William B. Sullivan, Trustees Danvers Lunatic Hospital, Danvers, Mass.
Lewis H. Hall, President of the Board of Trustees of the State Lunatic Hospital, Harrisburg, Penna.
F. Asbury Awl, Secretary Board of Trustees, State Lunatic Hospital, Harrisburg, Penna.
E. G. Carpenter, 29 Euclid Avenue, Cleveland, Ohio.
Dr. J. F. Robinson, President Board of Managers, Asylum No. 3, Nevada, Mo.
Dr. Katharine S. Snyder, Assistant Physician, Southern Indiana Hospital, Evansville, Indiana.
Dr. W. C. Lence, Superintendent Illinois Southern Hospital, Anna, Ill.
Dr. Kenneth MacKenzie, St. John's, Newfoundland.

The Association was called to order on Tuesday, June 6, 1893, at 10.35 A. M., by the President, Dr. J. B. Andrews, of Buffalo, N. Y., who introduced to the Association Dr. Henry Wade Rogers, President of the Northwestern University, Chicago, who welcomed the Association to the city of Chicago in the following words:

Mr. Chairman and Gentlemen of the Association: As representing one of the universities in this vicinity, it affords me pleasure to welcome you to the city of Chicago. The Chicago to which I welcome you is not, however, the Chicago which is best known to you. It is not the Chicago which extends thirty miles in one direction and eleven miles in another direction. It is not the Chicago of Chambers of Commerce and Boards of Trade, Stock Exchanges and Clearing Houses. It is not the Chicago of Manufactures and of Commerce. I desire to bid you welcome to that greater Chicago which is fast becoming known to the world,—to the Chicago of universities, of medical schools, of schools of law, and schools of theology. It may surprise some of you when I say that in this greater Chicago to which I bid you welcome there are more students assembled than in any other city in America. We have our universities numbering more students than Cambridge and Boston united; we have more schools of medicine with more students and attendants than you can find in New York or Philadelphia. This

is the great theological centre of the world. Chicago has the reputation of being a wicked place. Perhaps, therefore, it is proper that in this Chicago there should be more theological students than in any other city, not only in America, but in the world.

I cannot say to you, gentlemen, what I notice the Mayor of Chicago said when he welcomed the President of the United States to this city. He said: "Mr. President—If during your stay here it should transpire that you get into any little difficulties, there will be no trouble in getting you out of them, because the whole police force of the city of Chicago is at your disposal." I am not clothed, gentlemen, with the sovereignty of the city of Chicago, and I cannot extend to you the courtesy which the Mayor of Chicago extended to the President of the United States. I caution you, therefore, not to get into any difficulties while you are here.

But, speaking as a university man, I welcome you to the universities, to what they offer; anything that we have is yours; anything that we can do for you we shall be most happy to do. Command us! we are at your service.

I congratulate you that you hold your meeting in the highest assembly room in the world. Your deliberations, therefore, ought to be very much above those at any of your previous meetings, and I presume that for many years to come the proceedings which take place here to-day will be very much above any that you may look forward to in the future. I may not say to you what I heard a distinguished member of the American bar say to the Bar Association at Saratoga last summer. He said: Gentlemen—I feel all the greater freedom for saying what I am about to say, inasmuch as I am a member of the Episcopal church. I hope that in the speeches which are to be made here to-night they will follow the proverbial sermon in the Episcopal church, that is to say, I hope they will be ten minutes in length and nothing in depth. I may not say that, for I trust, and have no doubt, that in the addresses which are to follow there will be much that is profitable, much that will promote the objects for which this Association was formed, and which have brought you to this meeting.

But I welcome you as representing a profession which first gained recognition at the hands of the universities, at least in this country. The oldest of the universities in this country was undoubtedly established that the learned ministry might not die out, but the idea was not to educate ministers in theological schools, but simply to afford them the training which is afforded by college curriculums. The first professional school to be recognized by the universities was the school for training of physicians. The medical college that was established in the city of Philadelphia in connection with the University of Pennsylvania in 1765 was the first professional school to be recognized by the universities, and it was not until long after it that the universities recognized the legal profession by establishing at Harvard in 1817 the law school of Harvard University, and then the technical schools for the training of ministers followed them all. So, I say, I bid you welcome as representing a profession which the universities first recognized. And then I bid you welcome as a profession, not only among the most learned of the professions, but as representing a profession which is numerically stronger than any of the other learned

professions. I bid you welcome, too, as representing a profession whose high mission it is to save human life and to alleviate human suffering, a profession to which the world does homage. Even old Homer, before the Christian era, sung,

"The wise physician, skilled our wounds to heal,
Is mightier than an army to the public weal."

I trust, gentlemen, that your stay here in this city of Chicago will be in all respects a most happy and agreeable one, and that your meeting here will be all that you anticipate for it, that the results of your research and of your investigation and of your thought may be the promotion and the advancement of medical science, and especially of that branch of it which you represent and which appeals so strongly to the intellect and the heart, ministering to the human mind diseased. May God bless you and give you a successful and a happy meeting. [Applause].

The President, Dr. ANDREWS. Gentlemen: The next order of business is the appointment of a nominating committee. I would appoint as the committee on nominations: Dr. Gorton, of Rhode Island, Dr. Richardson, of Ohio, and Dr. Powell, of Georgia. This committee reports to-morrow morning, as you notice by the programme which you have in your hands.

A recess will now be taken for the registration of members.

Dr. GILMAN. Mr. President: Before this Association adjourns for registration I would move that an invitation be extended by this Association to the resident physicians of the city, to all officers of institutions for the insane, to members of boards of trustees and boards of State charities, and also to professors in the medical colleges, to sit with us during our session.

The motion was seconded and carried.

Dr. RICHARDSON. Before we take recess for registration, I would like to ask for information. There are some gentlemen here who meet for the first time with us, and who also meet in an official capacity, that is, as newly appointed superintendents of institutions. I would like to ask the rule governing their cases, as I was not present last year, whether under the new regulations, they are entitled to registration without the Council passing upon their application?

Dr. ANDREWS. They must become active members by being passed upon by the Council and become members by a vote of the Association to-morrow morning.

Dr. HILL, of Iowa. The printed list of members would be a guide for all who are in doubt. The list contains the names of all the members of the Medico-Psychological Association.

A recess was then taken to enable the members to register.

The Association reconvened at 11.10 A. M.

Dr. ANDREWS, the President, then read the following letter which had been received from Dr. Callender:

"CHICAGO, ILL., 134 Park Ave., June 6, 1893.

Dr. Henry M. Hurd, Sec'y, &c.:

My Dear Sir: I was unable to attend the meeting of the Council fixed for eight o'clock last evening by an unfortunate accident—the breaking of my fore-arm, the result of a fall occurring about four P. M. yesterday. I am suffering to-day and fear I cannot be at the opening session of the Association, and that I may not be able to attend during the meeting. I will thank you to explain to the Association the reason for my absence and to express my great regret at being unable to be present.

Very truly yours,

JOHN H. CALLENDER."

I know we shall all regret the absence of Dr. Callender, and particularly the accident which induced that absence.

The next action of the Association will be the listening to the President's address. The President then delivered the annual address.

At the close of Dr. Andrews' address, Dr. HURD said: I would move that the thanks of the Association be presented to Dr. Andrews for his very interesting and profitable address, and that the matters referred to, viz.: Uniform Courses of Study in Training Schools for Attendants, the Promotion of Medical Education in Psychology, and the Relations of State Institutions to Politics, be referred to proper committees to report at this meeting of the Association. I would suggest that the committees be appointed by the President.

The motion was seconded by Dr. Daniel Clark, who said that the topics presented for consideration were all very important: the matter of training schools for attendants, the necessity of giving lectures on psychology in medical schools, and the question of the relation of politics and asylums, a matter which does not trouble them in Canada, as all appointments there are made under civil service rules and are for life. The motion was thereupon unanimously adopted.

Dr. Andrews said that he would take an early opportunity of appointing the committees suggested.

Dr. J. T. SEARCY, Superintendent of the Alabama Insane Hospital at Tuscaloosa, then read the following memorial notice of Dr. Bryce, President-elect:

MEMORIAL OF DR. PETER BRYCE, PRESIDENT AMERICAN MEDICO-PSYCHOLOGICAL ASSOCIATION.

Peter Bryce, M. D., LL. D., President-elect of the American Medico-Psychological Association, died in his Hospital, at Tuscaloosa, Alabama, on the 14th day of last August.

Dr. Bryce was a native of South Carolina—born in Columbia in 1834. He was, comparatively speaking, not an old man, being in his fifty-ninth year at the time of his death.

Most truthfully can he be called a self made man. The death of his father while he was still a youth, left most of the planning of his early life in his own hands. The high aims that actuated his conduct all through life, exhibited themselves early. He earnestly remonstrated with his guardian who

urged his going into mercantile life, that the rather small patrimony left him should be spent in giving him a higher education. At his own solicitation he received a high school education in Columbia, and then received an appointment as a cadet in "The Citadel," the noted military institute at Charleston. He graduated there in 1857 with distinction, holding the rank of adjutant of the corps. He then attended the medical department of the University of New York, where he graduated in 1859, receiving the "Metcalf prize," a high honor in that old school in that day.

After a short trip to Europe, he returned to South Carolina and received the appointment of Assistant Physician in the Hospital for the Insane at Columbia under Dr. J. W. Parker.

Before he had been long in the Columbia Institution, he attracted the attention of Miss Dorothea L. Dix, the great philanthropist for the insane in this country, who recommended him to the trustees of the hospital in process of completion at Tuscaloosa, Ala. She urged his election to the superintendency of that institution. So great was the confidence of the trustees in the judgment and wisdom of that noble woman, they promptly elected him to that position, although personally unknown to any one of them, at that time unmarried, and only twenty-six years of age. I question if ever before so young a man has been elected to the superintendency of an asylum. The excellency of the choice of the trustees was never afterwards questioned; on the contrary it received a steadily increasing endorsement throughout the whole State to his death.

After his election, Dr. Bryce spent a few months visiting other institutions; then came with his bride to Tuscaloosa in November, 1860. He married Miss Ellen Clarkson of Columbia, South Carolina, from one of the best families of that aristocratic old State, a woman remarkable for her elegance and refinement. She still survives him in Tuscaloosa.

Dr. Bryce assumed charge of his hospital in 1860, at the beginning of a most trying period. The war of the States began soon after, before his hospital was hardly organized. With depreciated currency and no State credit to help him; with a hospital of patients on hand, whom it was impossible to return to their homes, the emergencies and necessities of the times served to try to the utmost all the energies of his nature. He had largely to devise means for the support of his hospital within itself. That he should have mostly supported and successfully carried his hospital through those troublous times of war was an accomplishment remarkable and worthy; but even more trying were "the days of reconstruction" that followed, "when politics went mad," and almost every thing else of interest in the State fell into incompetent and adventurous hands. I know of no other man who could have so well managed men and finance as to have brought his hospital through such years of war and trial, in such condition; and, more wonderful still, have kept it in his own hands. It was enough of itself to have distinguished the man.

But if such times tried men's souls, they also trained men's capacities; and in the very straits and necessities of those adventurous days, originated the methods that have since then all along characterized the economical and well ordered management, which, as much as any thing else, has contributed to his and his Hospital's reputation.

Dr. Bryce was pre-eminently a man of energy and work. To a remarkable degree he was independent and self-reliant; and while abundantly self-confident, unlike many, he was not offensive in it. On the contrary, he possessed great social flexibility and readily adjusted himself to different persons, and different phases of society. He was acceptable every where; pleasant, genial, large-hearted, courteous, generous, sympathetic; he was beloved by his patients and admired by his friends; he had few or no enemies. An omnivorous reader, he kept abreast of the day, not only in the literature of his profession, but also and particularly in the lines of advancing philosophical thought. He was truly "an advanced man." His ready ability to judge men and character, carried further, made him quick to appreciate truth and principle. He readily recognized the value of new thought, and selected new ideas with excellent discrimination.

Dr. Bryce held many positions of trust and honor. In the well organized Medical Association of Alabama, in time, he held several official positions. He was orator at Mobile in 1882, and President at Eufaula in 1878, and at his death was a Grand Senior Counsellor, and a member of the State Board of Health and Examiners. He held also, by appointment of the Governor, the chairmanship of the State Lunacy Commission, and was on the Committee to investigate the Convict System of the State.

He was also at his death Vice President of the New York Medico-Legal Society, and held a prominent place in the National Conference of Charities and Correction.

The presidency of the American Medico-Psychological Association, to which he was elected by your suffrages at your meeting last year in Washington, he considered the highest honor of his life. Unable, on account of failing health, to attend the Association, the telegram announcing his election found him on his bed, and the unexpected compliment went home to his heart. He longed to be able to assume the duties of the office, and was especially desirous of being present on this occasion.

The life-work of Dr. Bryce was, of course, the building up and the management of his Hospital. In probably no other institution has the management been more uninterruptedly under the control of one man. The law of the State is exceptional in this particular, and the trustees, having perfect confidence in his judgment and ability, all during the thirty-two years of his superintendency favored and practiced that policy; so that, more than in most hospitals, the excellency of the principle of "a one man government," and the excellency of his unhindered ability as a superintendent, have been exhibited.

He was a man well fitted for his chosen work. Both the scientific and the administrative departments of that large institution of over eleven hundred patients were efficiently conducted. The every day, ever varying interests of its outside management and maintenance did not suffer in comparison with the well conducted details of the scientific care and treatment of the patients in the wards. Every end was kept under constant supervision, and there was a general touch of all the departments with the central office.

Besides other particulars, his hospital has become noted for its economical management; and it is well said, that the economy has not been obtained at

the expense of the comfort and welfare of the patients. It has been a matter of general wonder and comment how, considering the apparent excellencies, it was possible that the State of Alabama only paid two dollars and fifteen cents per week per capita for its indigent and criminal patients; and also out of the savings from that amount the permanent improvements of buildings and grounds were paid for.

As I have said, the lessons learned in the necessitous days of war and reconstruction developed many features in the hospital management which have continued and been improved; besides, the climate of that latitude allows much more out-door and profitable work to be done by the patients than is usual. So that, under his care, the work of the patients has been made to contribute largely to the support of the institution.

In the great discussions, over the world and lately in this country, on the question of the value of mechanical restraint in the control of the excited insane, Dr. Bryce's name has stood foremost, and was probably most frequently quoted and assailed on the two sides. He himself made no particular claim to priority or excellence in this particular, but simply asserted that in his hospital there was no resort to these means. He did not deny the practicability, or the advisability in some instances, of mechanical restraint; but was proud to point to the fact that his institution had been run for ten years without any resort to such means in any case, and that, at the same time, there was less use of sedative drugs.

I feel that I have not time to speak properly nor sufficiently of your deceased President. At his death a general sense of a great loss pervaded our whole section. The people and the press of the State spoke feelingly of the worth of the man. In response to this general sentiment, the Governor ordered the flag at half-mast on the Capitol at Montgomery.

The General Assembly of the State at its session last winter incorporated his name into that of his hospital. It will hereafter be known as THE ALABAMA BRYCE INSANE HOSPITAL.

No man ever approached his end with more philosophical composure than did Dr. Bryce. He recognized to the fullest extent all of the conditions involved in his death, and arranged for it with consummate care and completeness. The welfare of his devoted wife, and the future of his hospital were apparently matters of his only anxious concern.

He has left a remarkable record and a notable example.

Dr. BLACKFORD. I would move that the thanks of the Association be tendered to Dr. Searcy for his appropriate address on Dr. Bryce, and that the address be put on minutes of the Association.

The motion was duly seconded and carried.

Dr. ANDREWS. The report of the Council is next in order.

The Secretary read the report of the Council as follows:—I beg leave to report that at the session of the Council last evening it was unanimously decided, in view of the expressed wish of Dr. Curwen to preside at the session of the Association next year, it being the semi-centennial session of the Association, and his preference to defer assuming the position of President

until that time, to request Dr. Andrews to continue as President during the current session of the Association.

The following have been recommended for active membership:

Dr. F. C. Hoyt, Clarinda, Iowa; Dr. Arthur Vallée, Quebec; Dr. E. E. Duquet, Montreal; Dr. Charles E. Woodbury, Boston; Dr. G. H. M. Rowe, Boston; Dr. Henry J. Berkley, Baltimore; Dr. Frederick Peterson, New York; Dr. J. Montgomery Mosher, Ogdensburg, N. Y.; Dr. Mathew D. Field, New York; Dr. Lowell F. Wentworth, Osawatomie, Kansas; Dr. James V. Anglin, Montreal; Dr. Francis T. Fuller, Raleigh, N. C.; Dr. James T. Searcy, Tuscaloosa, Ala.; Dr. B. D. Evans, Morris Plains, N. J; Dr. Amos J. Givens, Stamford, Conn.; Dr. William H. Hancker, Farnhurst, Del.; Dr. George L. Sinclair, Halifax, N. S.; Dr. W. T. Patterson, Aurora, Illinois; Dr. E. J. Bourque, Montreal.

In addition to these there is a number of applications which are not fully completed, and I hope those who have presented them will take pains to see that the applications are completed.

The following have been proposed for associate membership: Dr. Nolan Stewart, Jackson, Miss.; Dr. Ira O. Tracy, Brooklyn, N. Y.; Dr. Robert G. Cook, Ogdensburg, N. Y.; Dr. J. Francis Bothfeld, Westborough, Mass.

These names will be acted upon at the session of the Association to-morrow morning. Printed ballots will be prepared and circulated for the election at the proper time.

The President, Dr. ANDREWS. I trust that those who have presented other names that have not received the due number of endorsements will take sufficient interest to obtain those and perfect the applications and hand them to the Secretary. He has the blanks with him at the present time.

The Secretary announced a meeting of the Council immediately after the adjournment.

The Association adjourned at 12.30 P. M.

The Association was called to order by the President, Dr. Andrews, at 3 P. M.

Dr. GILMAN. If it be in order, I move that a committee be appointed to visit our friend and associate, Dr. J. H. Callender, of Nashville, who has sustained a severe injury, to ascertain his condition and to express the sympathy of the Association.

The motion was seconded by Dr. Gundry and unanimously adopted.

The PRESIDENT. How shall the committee be appointed?

Dr. GILMAN. By the President.

The PRESIDENT. I appoint as such committee, Dr. Gilman, of Iowa; Dr. Gundry, of Maryland, and Dr. Page, of Massachusetts. I would suggest that they visit Dr. Callender this afternoon and report his condition to the Association to-morrow morning.

Before announcing the appointment of the committees authorized this morning I have a request to make. It can hardly be expected that the

Committee on Uniform Courses for Training Schools will report at this session, as it is a matter that requires considerable consideration and some study, and I would suggest the propriety of the report being made at the next meeting of the Association. I would also suggest the propriety of considering the subject of preparing a manual for the use of attendants, somewhat after the manner of the manual of the English Association. I would ask that this committee be enlarged by the addition of one member, if there is no objection on the part of the Association.

Upon motion of Dr. Wise the committee was enlarged to four members.

The PRESIDENT. I will give my reasons for asking an enlargement of the committee. Dr. Curwen informs me that he has a manual in preparation. I think that if he is added to that committee, it will give him an opportunity to present his work, and will lighten the labors and add to the force and power of the committee. The committee named on the subject of Training Schools is as follows: Dr. Cowles, of Massachusetts; Dr. Dewey, of Illinois; Dr. C. K. Clarke, of Canada, and Dr. Curwen, of Pennsylvania.

The committee on "The Relations of State Institutions to Politics:" Dr. Gilman, of Iowa; Dr. Daniel Clark, of Canada, and Dr. P. M. Wise, of New York.

The committee on "The Promotion of Medical Education in Psychology:" Dr. Fisher, of Massachusetts; Dr. Blumer, of New York, and Dr. Blackford, of Virginia.

Dr. DEWEY. I would like to make a motion. It seems to me that the addition of the President to the last named committee will increase considerably its efficiency by reason of the amount of work he has already done in that direction. I would move that the President be appointed an *ex-officio* member of that committee.

The motion was seconded and carried.

The SECRETARY. At the meeting of the Council, the following persons have been recommended for election as active members: Dr. Geo. F. Keene, Cranston, R. I.; Dr. Henry D. Allen, Milledgeville, Ga.; Dr. H. A. Tomlinson, St. Peter, Minn.; Dr. G. O. Welch, Fergus Falls, Minn.; Dr. A. Stanley Dolan, San Bernardino, California; Dr. Isaac M. Taylor, Morganton, N. C.

The following have been recommended for associate membership: Dr. J. Elvin Courtney, Matteawan, N. Y.; Dr. J. Frank Edgerly, Philadelphia, Pa., and Dr. D. H. Fuller, Somerville, Mass.

These names will be presented to-morrow for the action of the Association.

Dr. Wise read a paper entitled "Hopeful Recoveries from Insanity."

Dr. HURD. It seems to me that this paper is one that is eminently timely at present, because the whole tendency of the profession and the public in general, including newspapers and medical editors, is towards the premature discharge of patients from hospitals for the insane. State Boards of Charities, Commissioners in Lunacy and medical men generally often seem to feel that they are doing good service to their fellowmen if they succeed in getting a patient out of an asylum under any pretext. I am sure that many of the relapses with which we have to deal are due to the fact that patients

have been removed prematurely from hospital or asylum. We should bear in mind, however, certain other things which, to my mind, are fully as important. It cannot be denied that there is a degree of harmfulness in an asylum association to some patients at a certain stage of their convalescence. This affords an excuse for the action of many medical practitioners who, for a variety of reasons, but generally from a lack of appreciation of the true character of insanity, desire to get the patient out of the institution. I think we as alienists have perhaps been a little deficient in our attention to the requirements of these convalescent patients. It seems to me that patients whose mental powers have begun to regain strength after the active stages of mania and melancholia are frequently not well placed in institutions. They are often annoyed by insane surroundings and their energies are taxed by the presence of recent cases of excitement or of teasing cases of melancholia. Convalescing patients are kept in close asylum wards too long for their own good, and their feeble mental powers are taxed by the strain which is brought upon them by the presence of other less hopeful patients.

For that reason, it seems to me that alienists ought to devise some method whereby convalescing patients can have a better opportunity for convalescence. In other words, every large institution ought to have a ward to be occupied largely by convalescent patients or at least by those whose mental condition is such as not to tax the mental powers of convalescent patients.

Of course, we all know the mental condition which is present in the convalescent patient. His mental operations are correct, but they are feeble. His brain cells have been exhausted by the antecedent attack, and opportunity must necessarily be provided for recuperation and repair and the acquisition of a certain amount of nerve force to enable him to stand the wear and tear of life. For that reason it seems to me that alienists ought constantly to make an effort to fortify and prepare patients for their subsequent life.

I have elsewhere said that every institution for the insane ought to have a convalescent cottage where convalescent patients could be by themselves; with proper diet, proper amusements, that is, amusements suitable to their capacity, and household labor or a degree of labor which is best suited to the feeble mental condition of each patient. I am glad to know that in many institutions erected on the cottage plan, this has been the case. I think it is the duty of the Association to see whether by means of cottages and workshops, and well arranged and well directed efforts to occupy convalescent patients, we cannot hasten their convalescence and send them forth into the world in much better condition to endure business and family life.

Dr. BURR. I have also been deeply impressed with the admirable paper that Dr. Wise has favored us with. There was one point particularly which interested me. I feel the importance of getting reliable data in reference to recoveries from insanity. The statistics to which the Doctor alluded seem inadequate for practical use. They are ancient, and I fear do not represent the experience of the present age, but they are the only ones obtainable. It seems to me that by united action on the part of those interested in asylum work, we might be able, after a series of years, to obtain reliable data as to the permanency of recoveries. Some institutions already have statistical tables which contain facts in relation to this very import-

ant matter, and I think there is growing interest in the subject. Tabulations, of course, would show only a part,—this because the statistics of one institution never could take account of those patients who had been discharged from one institution and committed to another; but sufficiently reliable data might be obtained if all who are interested in the subject would assist to determine what the present facts are in regard to recoveries from mental disease. Personally, I believe that the tendency to recovery from insanity is growing less and less, this because of the disposition, so to speak, of mental disease to assume organic forms. I think insanity is less frequently recovered from than it was in the early part of my asylum experience. It seems to me so, though I have not sufficient facts upon which to base an assertion. I think if it meets the approval of the Association, that I will propose later on a resolution, asking all the members of the Association who are identified with asylums which publish reports, to incorporate statistical tables in reports, showing something like this: (1) the number of readmissions; (2) the period of time that has elapsed between the present admission and the last preceding admission; (3) the condition of the patient at the time of last discharge. I think later on, if there seems to be a sentiment in this direction, I will propose this. The paper that Dr. Wise read was very enjoyable and profitable.

Dr. HILL, of Iowa. In State institutions, which are always crowded, the temptation to empty a bed in order to receive another patient is very great. Therefore, when the relatives come and tease to take the convalescent patient home, the superintendent is inclined to acquiesce in such a plan rather than send some other patient to the poor-house. That is one reason why some superintendents discharge patients sooner than they otherwise would, in addition to the reasons already named.

Dr. WISE. I have nothing to add except to approve Dr. Hurd's statement that convalescent patients *in* the hospitals have not received sufficient attention. The point I have tried to bring out would not be covered by that proposition, since a convalescent patient who had apparently recovered, that is, who had regained the power to reason fairly well, who had become coherent and able to look upon delusions of the past as delusions, I maintained had not recovered in a medical sense. The symptoms have disappeared, and that patient cannot be legally kept in the institution as an insane patient; and they usually have a pretty accurate knowledge of the situation. The consequence is that they use this argument very frequently. They desire to get out of the institution as soon as possible. It applies to a large number of hopeful cases, that is, to a class of cases that, with proper precautions as to environment and irritations for a few months after their discharge, would continue well. That class of patients should not be lost sight of. The home situation can be ascertained, and if it is found that their homes are not suitable ones, they should receive after-treatment if possible. They should be guarded against another attack, until they had regained a proper measure of endurance or resistance against the adverse circumstances they may be called upon to meet.

In regard to statistics, it is, as you all know, very difficult to get competent statistics, especially such as Dr. Thurnam secured in England. There

is no public institution in this country in which patients could be followed to their homes as they were followed there, and not only to their homes, but to the termination of life. Of course, we may assume that the conditions in Great Britain are not such as we would meet here. The matter of getting more accurate statistics of patients who have recovered is very important but it is also very difficult, and I do not believe it can be governed by any series of rules or tables. Dr. Earle's efforts to have relapses fully reported partially cover the ground discussed, and some of the asylums now give very full statistics in this respect, particularly in New England. This subject, however, is not pertinent to the paper.

Dr. DEWEY. I wish to speak on the subject under consideration and to express my hearty interest and sympathy in the question of the after-care of the insane. I believe that it is one of the most important duties that devolve upon those responsible for the insane to arrange, so far as may be possible, that the circumstances in which they are placed after recovery are such as their condition would require when they can no longer receive the attention of asylum treatment. I know that for many years I have always felt that one of the principal parts of my duty and pleasure was to make every effort that could be made to get the patient started right in leaving the hospital—to have all matters understood by the patient and the patient's friends in reference to questions of sources of irritation and of danger to the patient: to get the members of the family and the patient together and give them a talking to before the patient went home, so that there might be an avoidance of things that were likely to be harmful, and I have felt that in this way much good might be accomplished.

I think that our Association and its members individually, so far as they can, would do well to encourage any effort or movement that could be made in this country to take up the matter of after-care in a systematic way, as has been done in other countries, and to encourage any action of benevolent persons or societies looking toward care of those who go out of the hospital with the chances against them for remaining well, unless they receive intelligent guidance and assistance.

Dr. HURD. May I say a word? The suggestion of Dr. Burr that it is desirable to secure improved data in reference to relapses among the insane, presents to my mind a suggestion made the other day by a very eminent vital statistican whose duty it has been to study the tables of insanity in this country which were prepared according to the census of 1890. He said he was anxious to prepare a table showing the expectation of life in all forms of insanity. He had read carefully the statistics of asylums, and found that there are no data from which the expectation of life of the different forms of insanity could be worked out. He thought it of the greatest importance that in tabulations of large institutions an effort be made to show the age at the time of death of all the different forms of insanity. In addition there should be tables which would give the age of the patients by quinquennial periods. If such tables could be given, any actuary could make out at once a table of the expectation of life.

How long an insane person will live who gets well, and how long an insane person will live who does not get well, are still unsettled questions. I hope that Dr. Burr will include this inquiry in his circular.

The next paper read was one prepared by H. J. Berkley, M. D., of Baltimore, Md., entitled "Paretic Dementia in the Negro." It was read by Dr. Henry M. Hurd, in the absence of the author.

Dr. J. F. MILLER, of Goldsboro, North Carolina. I would like to enquire whether the word "negro" is used referring to the race entirely or whether the word "black" is used; whether the two are used synonymously?

Dr. HURD. The word "negro" is used.

Dr. MILLER. It has fallen to my lot to have charge of a hospital whose population is exclusively colored. I find that we have more mulattoes insane in proportion to the mulatto population of the State than we have of the negro proper. There is a distinguishing word used. The word "negro" means an unmixed race. The word "colored" with us embraces all of the negro race, both the black and the mulattoes. My experience does not accord with the experience of Dr. Berkley as set forth in the paper. It is proverbial that the negro is an imitative creature; that he has imitated the white man in nearly everything, but he has not imitated him, according to my experience, in paralytic dementia. I have seen in my hospital within the period of six years but one patient that was anything like, I may say, a typical case of paretic dementia, and he was two-thirds white. We have all other forms of insanity; insanity of strong delusions. I have some patients there that are as rich as Crœsus, but they are not paretics, they are cases of mania. I have no experience outside of my own hospital. I presume that the cases set forth by the Doctor, who lives in Maryland, were probably patients who have come from the city and have been made sick by metropolitan life. Our negroes in the country down in North Carolina are too poor to have paretic dementia.

Dr. F. H. CLARKE, of Lexington, Kentucky, said: Every southern physician must have noticed the large increase of insanity among the negroes since their emancipation. While this increase is probably more apparent than real, owing to the fact that they are now when insane cared for almost entirely by the States, and not as they were often formerly, by their masters, undoubtedly insanity is much more common with them than in the days of their slavery. Formerly many insane slaves were kept at home, either because they were still useful as servants, or from other motives; now when they become insane and can no longer support themselves they must go to the State, or other public asylums. The cases among them are thus brought more into notice; still there can be no question, I think, that the new and changed conditions and relations into which they have been brought have resulted in large increase in mental diseases among them. It is part of the price they have had to pay for the new condition.

Paretic dementia is very common among negroes in my locality. Nearly one-seventh of the population of the institution with which I am connected is made up of negroes, and the proportion of this disease is considerably greater than with the whites.

Dr. Berkley has described the disease in the race so accurately, and so nearly as I have seen it, that I can hardly add anything to what he has said. My cases have almost always followed the lines so accurately laid down by him: the short first stage, rapid development and progress, and,

almost invariably, quick, fatal termination. The predominance of motor over intellectual symptoms, and rapid and profound dementia have also been characteristic. I have not seen so much of grandiose delusions as with the whites, but they are by no means uncommon, modified and colored by their former surroundings and manner of life. The characteristic sense of well-being is usually present at some stage.

Perhaps the fact that the disease prevails among insane negroes in Kentucky, and not in Dr. Miller's section, can be accounted for by the great tendency of the race with us, to leave the country, and herd in the towns and cities. Thousands of them are herded in poverty and squalor in the suburbs of Kentucky towns and cities, living, no one knows how, when it is hard to find servants and laborers for the surrounding farms and plantations.

Dr. H. K. PUSEY, of Lakeland, Kentucky, said: My observation from the study of one hundred and fifty colored patients is that the negro is fully asserting his equality with the white man in the production of paretic dementia. The only cases of paretic dementia among females that I have seen were both full-blooded negresses.

Dr. F. H. CLARKE, of Kentucky, said that he had seen the disease quite frequently in both the mulattoes and pure blacks. He had noted no material difference.

Dr. B. W. STONE, of Hopkinsville, Kentucky, said: In my institution there are fifty-five or sixty negro men and a little larger number of negro women. Twenty years ago (my observation has extended back about twenty-four years) there were very few cases of paretic dementia among the negro race. It has increased markedly in the last twenty years. The increase in the responsibilities that have devolved upon the negroes in that time would probably account for this. There is no difference certainly between the black negroes and the mulattoes. Some of the worst cases of paretic dementia are those of very black negroes. The disease has increased very rapidly. We have a very large number of them, and the proportion is fully up to that of the white people, if not greater.

Dr. HILL, of Maryland. The question of insanity in the negro race has become a very interesting one to alienists. Dr. Berkley's paper and the very valuable discussions that it elicited have thrown considerable light upon the subject, and it only remains for some one to collect these scattered facts with other information that has been made available on the subject, and to present them so as to allow a deduction to be drawn—why the influence of metropolitan life, the blue grass region of Kentucky and the cotton belt of North Carolina should present such variable results in the negro's tendency to paresis, are questions well worth considering. It strikes me with surprise that Dr. Berkley places such a low estimate on the influence of alcohol and syphilis in causing paresis in the negro. With his well known tendency to copy the vices of civilization, his fondness for alcohol, and the proverbial sexual laxity of his race, one would suppose that these two great disturbing elements that play such an important *rôle* in the production of paresis in the Caucasian would be a decided factor also with the negro.

Dr. GILMAN, of Iowa. The experience that I have had with the colored

patients that have come to our institution coincides almost exactly with the experience of Dr. Hill, of Maryland. Of course, with us the number of colored patients is comparatively small and yet in almost every instance, I may say in nine-tenths of the cases of colored patients with paresis, and we have had quite a number, according to the number of colored admissions, the disease resulted from a syphilitic lesion and an alcoholic lesion combined. I think I have almost been ready to believe that every patient that we have received that has been colored has been afflicted with a syphilitic lesion. Whether this is due to a northern climate, as might be suggested by the remarks of Dr. Miller, I am unable to say.

Dr. HURD. In closing the discussion, I think perhaps it is well to call attention to two facts. *First*, that paresis is a disease of city life. The Eastern Michigan Asylum, at Pontiac, receives patients from the larger cities in the State and the number of paretics there is much greater than in the other institutions which derive their patients from agricultural regions. I think it must be borne constantly in mind in studying the etiology of general paresis, that it is a disease of cities, not of the country, and wherever negroes are subjected to city life there they will develop paresis. When they live quietly in the country, as they usually do, there is not a very large proportion of paresis. *Second.* In regard to an admixture of white blood as a factor in the causation. I remember the first case of paresis in a woman I ever saw in my life was a colored woman, and a very black one at that. The cases mentioned by Dr. Berkley were all black, much darker than the ordinary negroes. I do not think that the admixture of white blood has anything to do with it. I have sometimes thought that the white admixture might be a saving grace. I have found that the mulattoes were more susceptible to tuberculosis, and that the black ones were more subject to general paresis.

The next paper read was one by Dr. Frank C. Hoyt, of Clarinda, Iowa. The subject was "Tropho-Neuroses in the Insane."

At the close of Dr. Hoyt's paper, Dr. MATHEW D. FIELD, of New York City, spoke as follows: I have given a little attention to hæmatoma auris. I maintain that it is due to traumatism occurring in cases where the ear has been subjected to long continued injury. I had the pleasure of exhibiting five cases to the New York Neurological Society in professional boxers. I was told by those "gentlemen" that if I had called upon them in those days in New York when "the profession" was at its height I might have had a hundred.

I tried to trace the statement that it occurred in the statues of the Grecian athletes. I was unable to find who was the author of such a statement, but I have seen the statement somewhere. I have, however, discovered such a statue. It is the statue of an athlete which was unearthed in Rome in 1887 and is supposed to be of Grecian origin. It is an example of hæmatoma auris. It is described, with an illustration, in my article on Othæmatoma. Any of the members of this Association can see this statue in the main hall of the Liberal Arts Building at the World's Fair. The boxers also informed me that similarly deformed ears were not infrequently met with among acrobats; the ones who were accustomed to be the under-men,

and who received some companion who, after somersaulting, would land on their shoulders; in this way their ears had received injury, resulting in the characteristic deformity. It has been found in hotel porters, the result of the pressure of heavy trunks against the auricle. Several cases have been reported in children where the school-ma'ams had twisted the ear. It occurs very frequently in football players.

We have two conditions, namely, hæmatoma auris and perichondritis auriculæ, that result in permanent deformity of the external ear very similar in appearance. Cases of cyst and tumor have often been confused with and reported as hæmatoma auris, but should be excluded as distinct conditions and of very different origin. Perichondritis, while resembling hæmatoma in the resulting deformity, differs in etiology, course and pathology.

I am informed by sportsmen and others that blood tumors resulting in thickening and deformity are not infrequently observed in the ears of hunting dogs, those that chase the game through thick under-brush, injuring the external ear in this way. It is interesting to note that one of the cases that I had photographed at the asylum was a negro, with double hæmatoma; he was in the third stage of general paresis of the insane; he had been a professional boxer; the deformity in the left ear had occurred long before he became insane; that on the right side had developed in the asylum.

Hæmatoma auris is nearly, if not always, precipitated by external violence applied to the auricle, though this violence may be only slight.

Hæmatoma auris is not a disease peculiar to the insane, but is found quite as frequently among the sane. Hæmatoma auris, when occurring in the sane is usually found in those classes of individuals who are especially subject to continued traumatisms of the external ear, such as boxers, acrobats, porters, football players, and the like. It occurs in those who receive continued and oft-repeated blows on the external ear, of no great violence, rather than in those who receive one violent injury to the ear.

It appears that in the cases of hæmatoma in the sane, the continued irritation or traumatism received, gives rise to changes and degeneration in the structure of the external ears that predispose to hæmorrhage, and that only an insignificant blow is sufficient to precipitate the disease. The changes and alterations in structure produced by continued irritation or traumatisms in the insane, act as predisposing causes in a similar manner in the sane.

I was unable to find among the sane a single case where the disease seemed to have arisen from a single severe blow; I could not find a single example in a prize fighter, but I found it in professional boxers, some of whom had been in prize fights. We should consider these predisposing causes of more importance than the single blow that precipitates the disease.

So-called trophic changes and alterations in circulation play a very unimportant part in the causation of hæmatoma auris, either predisposing or exciting in the sane or insane.

When hæmatoma auris appears among the insane, it occurs among the chronic, demented, and restless class, who, by constant working at and rub-

bing of their ears with their hands, or by action of their head while in bed, or by many falls and conflicts with other patients, and sometimes with attendants, bring about the same changes as occur in boxers, acrobats, foot-ball players and the like.

When we consider that hæmatoma auris occurs in the chronic and restless class of the insane, it is not strange that its appearance has been looked upon as an indication of incurability.

The indication of incurability of the mental condition is not necessarily to be explained on the theory that trophic changes have taken place. It is quite as reasonable to accept the fact that it occurs in cases where repeated but not severe traumatisms have been received, and that this condition happens most frequently in the chronic and incurable insane. I think that nobody would attempt to advance the theory that trophic changes would account for the frequent appearance of hæmatoma auris among boxers, or that its appearance has any effect upon their mental condition.

It seems to me that the deformed ear so frequently met with among boxers, acrobats, and football players is the result of changes following a true hæmatoma, and is identical in etiology, course and pathology in the two classes of cases.

Dr. DANIEL CLARK said: It is my impression that the "insane ear" has a primary cause in the trophic centres, and not in any extraneous excitant.

It may be that blows from falls, accidents, or it may be the hands of attendants sometimes are the *occasion*, but not the *cause* of hæmatoma auris, the cause being in the pathological state of the parts, which violence may sometimes make manifest. It is my impression that attendants are often wrongfully accused as being the authors, through rough treatment, of this condition. Some reasons for so believing are as follows:

In the first place, it is seldom if ever seen in acute mania, when injury to the body, including the ear, most commonly takes place. In the second place, it is seen most frequently in the left ear, but if traumatism were the principal cause, there is no reason to believe that this selection of the left ear would take place. In the third place, men are more subject to be afflicted in this way than women, yet the latter are more restless and excited than men, and more likely to be bruised, and are more trying to the temper and patience of women nurses. In the fourth place, it is very prevalent in certain forms of insanity. It is very common among epileptics, chronic maniacs and paretics, but is not often seen in dementia. To my mind, these, and such like facts indicate that in the great majority of cases it is spontaneous, and indicates arterial degeneration of the terminal branches of the posterior auricular artery, which branches off from the carotid artery. There is also present a degeneration of the vaso-motor fibres of the cervical sympathetic. We know also that it can be produced in a few hours, or even in a day.

Did we not allow for these diseased conditions as existing, then would it be impossible reasonably to account for its absence in such a large number of sane and insane who have injury of the ear inflicted without such results.

Dr. FISHER. At our hospital we have had a great many autopsies made

during the past ten years by an expert pathologist in the city, Dr. Gannett, and I have been struck by the large number of cases of pachymeningitis hæmorrhagica. As to any theory as to its origin in the pia mater or the arachnoid, I have little to say, the various theories not having come up for discussion. I think the theory propounded by the writer of the paper a very reasonable one, and I do not see any reason why it should not be adopted.

In regard to the subject introduced by the gentleman from New York, it reminds me that I have recently had in my hospital two cases of hæmatoma auris, both of which were successfully treated by the application of contractile collodion: painting the ear three or four times a day from the beginning, very rapidly reducing the swelling and preventing rupture and deformity. I agree fully with that gentleman in reference to the origin of the hæmatoma auris. It generally arises in patients suffering from degenerative forms of insanity, and where there are nutritive changes more or less profound. It is often due to friction by a restless patient upon a pillow, it may be a patient in restraint who is extremely restless and in a low state of vitality. He is restrained, tied in bed, perhaps, to save what strength he has, and he moves his head from side to side and keeps up a continual friction of his ears, and in that case he is likely to get a double hæmatoma auris.

I should like to enquire if any other gentlemen have tried the contractile collodion?

Dr. WILSON. I desire to express my appreciation of the most excellent paper that my friend, Dr. Hoyt, has read, and to state that he has made quite an extended observation of this subject, and at his numerous autopsies he has on numerous occasions demonstrated conclusively to my mind the position he has taken to be correct.

Dr. RICHARDSON, of Ohio. I am satisfied that the general subject of Trophic Neuroses in the development of insanity is one which has not received sufficient consideration. I am sure we have all been impressed with the evidences which we get in the incipient stage of insanity, in the developmental period of the auto-intoxication, of the auto-toxic effect coming from the retained excreta, from the retention of the products of cell and tissue metabolism, and it strikes me that this arises in almost every case from the nerve paresis resulting in trophic changes, or really what we mean by trophic changes, the trophoneurosis. A direct illustration, which we have all noticed, is to be found in the epidemics of la grippe from which the country has been suffering during the past year. In my experience, and I presume it is similar to that of others, there is no disease which has been more productive of mental disorders or general nervous disturbances than these epidemics, and the direct influence of this disease germ, whatever it may be, seems to be upon the nervous system primarily, resulting in the paresis or weakening of those nerves which control secretion and excretion. The consequence is that the system becomes poisoned by the retention of these excreta and that reacts upon the system in general and still further destroys the influence of those nerves controlling nutrition. It is a difficult subject, I must say, even for

the pathologist and the microscopist. These conditions in the incipient stage of insanity are the most important problems with which we have to deal, viz.: the removal of these retained excreta and the restoration to those nerves which control nutrition of their strength and the ability to control the functions of the various organs of secretion and excretion which they have lost.

I am only sorry that the Doctor did not broaden out a little on that feature of his paper. It is a very important one, and the title which he gave his paper is in a line which I hope he will pursue further in the future, because I am sure that in the pathology of acute insanity it is a most important feature.

Dr. HOYT. I am exceedingly grateful for the discussion that has been elicited by my humble effort. I fear, however, that the views held by Dr. Field in reference to the traumatic origin of hæmatoma auris, are in a measure an imputation upon the management of our hospitals, and one under which we should not rest without at least deciding that he is correct. He says: "I think that the majority of cases are of a traumatic origin." Now this means that in our cases of insane ear, an attendant has struck the patient, pulled his ear or permitted another patient to do so; in both instances disagreeable occurrences.

If you look back to numerous hospital investigations, which come as regularly as political waves, you will find that the charges of abuse have nearly invariably been founded upon cases of tropho-neuroses occurring among the insane. The numerous exaggerated bruises, the acute decubitus, and other familiar changes are, in my opinion, brought about by the same causes which produce hæmorrhagic pachymeningitis. I know that I have seen cases of double hæmatoma auris in which I was sure that no violence had been committed, which could have produced an effusion of blood in a well person. When the lesion is caused by slight violence, the cause is in the essential vaso-motor disease, and the violence has simply hastened the rupture which was already imminent.

Lesions in the insane are brought about by violence which in a person with normal vascular system would do no injury whatever; and, while attendants may use violence in certain cases, yet I should hate to say that they did so in anything like the majority of cases. I think attendants are, as a rule, blamed for a great deal more violence than they do, and, as we are indirectly responsible for their actions, we should be careful not to charge them with having caused bruises and other lesions which are due to really grave nutritive changes.

Dr. Richardson's argument is excellent, and I am very glad indeed that he has spoken as he did. His views coincide with my position on the subject, and I think his theory as to the pathology of "grippe" is correct, so far as we are able to say. I am confident that if hospital men and pathologists would study the subject further, we would find sufficient ground for claiming that "grippe" is due to functional disturbance of the vaso-motor centre.

Dr. ANDREWS said, in reply to Dr. Fisher's inquiry, that they had used the contractile collodion, both the blistering and the ordinary, at the Buffalo State Hospital.

Dr. HILL, of Maryland. I have a standard preparation for almost any little abrasion that occurs about the hospital. It is a combination of collodion, carbolic acid to make it antiseptic, and oxide of zinc, enough to make a paste. For hæmatoma, it has always acted satisfactorily. Whether that combination adds anything to the virtue of the collodion, I am unable to say. The condition subsides of its own accord within a day or two. I have used this same preparation, exclusively, for several years, for erysipelas, discarding the usual iodine application and applying this without any other medication whatever. I think that the combination of the zinc, collodion and carbolic acid seems to be about as effective as the usual methods of treatment.

The next paper was read by Dr. H. C. Eyman, Superintendent of the Hospital for the Insane at Cleveland, Ohio. His subject was "The Effect of Ignorance and Superstition in the Treatment of Mental Obliquities."

Dr. C. K. Clarke read a paper entitled "Some Problems in Cell Nutrition."

Dr. BURR. I would say that the only cases of paretic dementia I ever knew in which marked improvement, or improvement of any considerable duration occurred, were two which came under observation several years ago. Each patient had a bed-sore: one, located upon the sacrum—a large deep slough which exposed the bone; the other, upon the heel,—this laying bare the os calcis. These patients improved much in mental condition after the occurrence of the sores. I reported the cases a number of years ago. Both men are now dead; but one lived until about a year ago, dying in consequence of consumption, not from the nervous disease. There are, as Dr. Clarke rightly points out, a good many interesting things, and things which may set us to thinking, in reference to the relation which exists between intercurrent maladies and improvement or recovery from insane conditions. I was very much interested in the paper.

Dr. GORTON. I think the paper of Dr. Hoyt, the remarks by Dr. Richardson, and the paper by Dr. Clarke are of great interest and value. They show that we are awakening to a study of some of the more subtle and intricate problems in pathology, and that we are no longer content with simply tabulating our cases as instances of melancholia, mania, dementia, &c., and endeavoring to prescribe for them only in the direction of the diagnoses with which we have been too easily satisfied. We are not so easily satisfied as formerly with the results of anatomical investigation alone. It is all very well to examine the lesions present at death, and we have thus obtained a valuable mass of facts relating to these conditions, but I think we are beginning to see that this knowledge is only valuable in so far as it bears a relation to the conditions that antedated the lesions observed. In other words, we are going back to the old humoral pathology, in some sense, and reviving the belief that there must be something more than a wasted cell or connective tissue hyperplasia to account for all that has happened prior to and during the development of mental disease. We are preparing to do better work for the insane by the new era of investigation upon which we are apparently entering. The experiments of Brown-Séquard, the results of the treatment of myxœdema by preparations of the thyroid body, the results

of subcutaneous injection of various other preparations, while to some of us they were at first novel and amusing, and perhaps suggestive of the doctrines of the early Oriental medical men, have certainly brought about some very surprising results. While we cannot accept all the prognostications made for these methods, it is certainly not well for us to treat them too lightly. In a large sense we do not find many morbid conditions of the body for which there is not some remedy and the introduction of various substances, yet to be discovered, into the circulation, may be hereafter employed with as great benefit to diseased conditions, as the limited number that we now employ without wonder.

I think that the theory advanced by Dr. Richardson, of auto-intoxication, as a cause of many nervous diseases, is worthy of the most careful study and investigation, and I believe there are many more diseases dependent upon such conditions than we have hitherto been led to suspect. The pathologist who shall devote his attention to this branch of pathology will confer a lasting benefit upon the profession at large, and in order to stimulate such work let us encourage those investigators who have opportunity to test the various animal extracts, precisely as we encourage the therapeutist who tests the operation of the many vegetable alkaloids, coal tar products, and so on, as well as those who study the results of baths, massage, diet and allied measures in the treatment of disease.

Dr. KILBOURNE. I have in my mind a case illustrating the beneficial effects of blood-letting in some cases of insanity. I was called into the wards to attend a patient who had made a desperate attempt at suicide by cutting her throat, thereby losing a great deal of blood. In two hours that woman was perfectly clear in her mind, and before the wound healed she was taken out perfectly well, and, so far as I know, is a well woman to-day.

Dr. HURD. Some weeks ago, I had occasion, while in New York, to visit Dr. Simon Baruch who is engaged in studying the effects of water under varying degrees of temperature and varying degrees of force upon cases of nervous and mental disease. I examined his apparatus with great interest. He certainly has gone into the whole subject from a scientific point of view in a manner far superior to anything else I have seen. I was also very much impressed with the beneficial effects which he seemed to get in cases of locomotor ataxia and general paresis, in fact, in all degenerative forms of mental disease, including dementia, and, as I saw what he was doing, I very naturally said to myself, How can you explain this? What is the explanation of the success of the cold douche or of the douche coming at ten pounds' pressure, or of the hot douche alternating with the cold, or of the cold douche suddenly changed to the hot douche? What is the action of all this? My only explanation was that somehow and in some way these changes in temperature and intensity modified nutrition, by which I mean cell nutrition.

I have been very much interested to see that the members of the profession, especially those who are engaged in the treatment of mental diseases, are waking up to the idea that we must do more in the way of therapeutics for mental disorder. It is not sufficient to give the patients good beds to sleep

on, three meals a day, a remedy for sleeplessness and regular bodily exercise. It is evident that within the next ten years we are to use remedies and therapeutic measures much more efficiently than ever before. We shall modify cell nutrition by hypnotism, cold water, electricity, animal extracts, etc., and benefit mental disorders in this manner rather than with hypnotics and narcotics.

Dr. RICHARDSON. I desire briefly to report a case somewhat in the line of Dr. Kilbourne's remarks. It was very instructive to me, and yet I am unable to explain it.

While I was in practice in Cincinnati, a boy thirteen or fourteen years of age was brought to me for examination, who had been struck on the head eight or nine months previously by a vessel containing incense at the church where he was an altar boy. It struck him on the head, knocked him down; he was unconscious, for a short time and subsequently he had frequent attacks of vertigo and pain in the head. These became more frequent and they were followed afterwards by maniacal attacks, but without any convulsions. He would suddenly become maniacal, would talk wildly, throw himself about in his bed, stare at the other persons in the family, and talk continually. He would continue in this condition for twenty or thirty minutes, and then return to the normal condition mentally, without any knowledge of the attack, it being followed by severe headache. He developed during this time a peculiar waxy complexion, was exceedingly anæmic, but not the ordinary anæmia, a waxy pallor. The attacks became so frequent, occurring every four or five days, in spite of all medicinal remedies, that I advised the physician and his parents to have an examination of the skull made at the point of the injury, where there was a scar, probably an inch or an inch and a quarter in length, but at which it seemed uncertain whether there was any real injury to the skull or not. There seemed to be a slight depression there, and yet you know how difficult it is to determine whether there was a fracture or not, when the wound has not healed without suppuration. Following that advice, an operation was performed. We did not discover any injury to the bone, when we got to it. But I advised taking out a button of bone anyhow, from the experience of Agnew and some others as to the curative effect of operations *per se*. We took out a button of bone. He bled quite profusely from a large vessel in the diploë, and in his anæmic condition I became quite frightened before we could stop it. We simply had to plug it. The boy, however, rallied fairly well, considering his condition. The wound did not heal as we hoped it would, though the ordinary aseptic precautions were taken. There was some suppuration. But from that moment the boy has not had an unfavorable symptom. That has been about fifteen months. And at the last time he came to me at my office in Cincinnati you would be surprised at the change in his complexion. He was as ruddy as any boy of fifteen could be; he had no headache, no suppuration. We did not open the dura.

There was some change in the nutrition of the boy, as evidenced by the way he produced blood; that was the result of the operation. I think it can only be explained by the remarks preceding, that there was some modification in the cell nutrition, in the organs which produce blood, in the assimila-

tive processes, by that operation, by the loss of blood, or by something I don't know what. Anyhow, the boy made blood differently afterwards. Probably that was the chief factor in his improvement subsequently. It was a very interesting case, and something in the line of what we have been discussing this afternoon.

Dr. BANCROFT. The last paper has interested me very much. It seems to me that in our asylum practice we have no cases that are more interesting and more perplexing than this class. We have apparently organic mental disease, and the prognosis appears hopeless, and then some accident occurs that puts an entirely new aspect upon the case. I remember two such cases. One, a young man who was apparently demented and threw himself out of the window, and who immediately began to recover from the effects of what we call shock. Another case was that of a woman afflicted with melancholia, in a very bad condition, and who attempted to hang herself and was partly resuscitated by the nurse. A change immediately took place in her, and within a week from the attempt at suicide she was quite well mentally and soon after was discharged recovered.

In such cases there seems to be some connection between somatic change and psychic condition. There is no more interesting class of cases in our asylum practice than these very perplexing ones.

Dr. DEWEY. Mr. President: Before we adjourn I have one thing that I would like to say in behalf of the Committee of Arrangements.

As it might possibly be noted by some of the members, our programme or the provision made for the members does not embrace any excursions or trips of any kind. That matter was considered by the Committee, and we had come to the conclusion that the members would probably prefer to devote all the time that they could spare from the meetings of the Association to the permanent attraction, the World's Fair, and would not thank us for getting up excursions or entertainments which would perhaps interfere with their visits to the Fair. And at the same time it is quite possible to arrange for trips by land or water, and the Committee of Arrangements is ready to do whatever is the general wish of the members of the Association. We should be glad to hear from other gentlemen what is in any way agreeable to them.

Dr. WISE. I think the Chairman and the Committee of Arrangements have shown a great deal of wisdom in arriving at their conclusions. I have no doubt that they have been able to penetrate the mind of nearly all the members of the Association, with regard to the use of the time which the members will be able to have at their disposal after the sessions of the Association, and I, for one, want to speak very emphatically in favor of relieving the Committee of Arrangements from making any arrangements for excursions or for the use of the time outside of the sessions of the Association.

Dr. ANDREWS. It occurred to me that the Committee of Arrangements had pursued the proper course, in accordance with the conversation had last year in Washington and in accordance with the arguments used for coming to Chicago, that is, the presence of the World's Fair here at this time, and it was supposed that the members of the Association would prefer to give as much time to that as practicable outside of the meeting.

Dr. HILL, of Iowa. Some may not have scrutinized the programme closely.

There is no provision for meetings in the afternoons. Those who have been to the Fair know that they can get very leg-weary in half a day.

On motion, the Association adjourned at 6 P. M. until Wednesday morning, June 7th, at 10 o'clock.

The Association was called to order at 10.20 A. M. Wednesday, June 7th, by the President, Dr. Andrews.

The PRESIDENT. If you will note the programme, you will see that the first work to be done this morning is the election of members. You will remember that, in accordance with our new constitution, the names of those desiring membership in the Association are presented to the Council, each person being recommended by three members of the Association. Yesterday the Council received quite a large number of these applications in due form and some that were not in regular form. Those have since been completed, and action has been had by the Council. The Secretary, in behalf of the Council, will now distribute the ballots for the election of members whose names were recommended prior to yesterday. Those who have since been recommended by the Council we have not been able to get the ballots for. And it was suggested that the President or Secretary read the names of these applicants, and if there is no objection to the election of each one, that some one be designated to cast the vote of the Association, as our constitution requires that every one shall be admitted by ballot. The Secretary requests that I appoint two tellers who will distribute and take up the ballots after the vote has been cast. I appoint as tellers Dr. Hill, of Maryland, and Dr. Murphy, of North Carolina. You will find the ballots here at the Secretary's desk.

You will remember that these recommendations were made according to the best light the Council had. Each application has been endorsed by three members of the Association.

To expedite matters, while the tellers are counting the votes, I will call up the next order of business, which is unfinished business.

Dr. GILMAN. Your commitee appointed to visit Dr. Callender did so under some obstacles. We were about two hours getting out on the cable line. We found that Dr Callender had suffered so much from his fractured arm that he thought it best to return home, and did so yesterday afternoon.

I move, Mr. President, that, under these circumstances, the Secretary of this Association be instructed to write to Dr Callender a letter expressing the sympathy of the Association in view of this accident.

The motion was unanimously adopted.

The President read the following telegram from Dr. Cowles, addressed to the Secretary of the Association:

"Please extend my congratulations to the President and the brethren on the first meeting of our new Association, with best wishes for its success, and regret that imperative reasons prevent my being present.

E. COWLES."

Dr. Hurd made the following report for the Council:

The following named members have been approved by the Council for active membership:

Drs. Henry B. Jacobs, of Baltimore, Md.; L. C. Mead, of Yankton, South Dakota; Charles K. Mills, of Philadelphia; L. L. Rowland, of Salem, Oregon; Silas Evans, of Lexington Ky.; B. H. Hoyt, of Spencer, West Va.; R. S. Wilson, of Fulton, Mo., and Sanger Brown, of Chicago.

The following two as associate members:

Drs. Adolph Meyer, of Kankakee. Ill., and J. A. Prieur, of Montreal.

Upon motion of Dr. Blackford, of Virginia, the Secretary was empowered to cast a ballot for the election of the gentlemen whose names had been recommended by the Council.

The Secretary then cast the ballot, and announced that all had been unanimously elected.

The PRESIDENT. The next business on the programme is the report of the Nominating Committee.

Dr. Gorton presented the report of that committee:

The Nominating Committee begs leave to submit the following report:

For President—Dr. John Curwen, of Pennsylvania.

For Vice President—Dr. Edward Cowles, of Massachusetts.

For Secretary and Treasurer—Dr. Henry M. Hurd, of Maryland.

For Auditors—Dr. Richard Dewey, of Illinois, and Dr. A. R. Moulton, of Pennsylvania.

For Councillors for three years—Dr. P. L. Murphy, of North Carolina; Dr. Charles P. Bancroft, of New Hampshire; Dr. H. A. Tobey, of Ohio, and Dr. Daniel Clark, of Ontario.

The above report of the Nominating Committee was unanimously adopted.

The next order of business was the report of the Auditors.

Dr. Dewey presented that report, as follows:

THE REPORT OF THE AUDITORS OF THE AMERICAN MEDICO-PSYCHOLOGICAL ASSOCIATION.

To the Association:

Gentlemen: We, the undersigned, Auditors of the Council of the above Association, hereby report that we have examined the books, accounts and vouchers of your Treasurer, Dr. Henry M. Hurd, and from such examination are satisfied of the correctness of the same.

We further recommend that the customary annual assessment of five dollars for each active member and two dollars for each associate member be continued for the year 1893–4.

Signed, RICHARD DEWEY,
C. K. CLARKE.

The report of the Auditors was unanimously adopted.

The paper of Dr. Cowles, "A Clinical Study of Melancholia," was read, in his absence, by Dr. Fuller of the McLean Hospital.

Dr. DEWEY. I desire to express the appreciation which I no doubt share with all the members who have listened to this admirable paper of Dr. Cowles. The study which is made of the different states of this disease, and the points of differential diagnosis in these states are certainly of great value. I hope the paper will be placed permanently in our Transactions, or at least placed where we can avail ourselves of it permanently. I think we will all agree as to the truthfulness of the picture which Dr. Cowles has given us of melancholia, and it is worthy of more study and thought than it is possible to give it by simply hearing it read.

Dr. D. R. Burrell, of Canandaigua, read a paper: "The Insane Kings of the Bible."

Dr. HURD said: We have all listened with great interest to this good paper of Dr. Burrell. I am sure no one before has followed out these cases as carefully as the Doctor has done in all their details. The explanation of Saul's condition as depicted in the Bible is new to me and certainly very satisfactory. He seems to have been a typical case of pubescent insanity, being an undisciplined person who had honor thrust upon him in an unexpected way and becoming throughout the rest of his life either excited or depressed. When in a state of depression he was extremely religious and when in a state of elation just the opposite. We ought to have much charity for Saul, because we can recall in our asylum experience many similar Sauls.

Dr. DANIEL CLARK. Dr. Burrell's paper is very suggestive. Moses, the Jewish lawgiver knew what insanity meant. Fifteen centuries before the Christian era his punishment for disobedience was a terrible curse, "The Lord shall smite thee with madness." At the first visit of David to king Achish he feigned to be mad with considerable success. The Philistine king was disgusted at his conduct, for David "scrabbled on the doors of the gate and let his spittle fall down upon his beard." He must have seen other insane do the same things, or this conduct would have had no effect upon the heathen king. This monarch of Gath, suspected that the drivelling Israelite was a schemer. David, seeing he was not a success as an impostor sought safety in flight. The king pointedly said, "Have I need of madmen that ye have brought this fellow to play the madman in my presence?" He virtually said "Am I such a fool as not to see through this flimsy device?"

Saul was subject to fits of melancholy and mania of the intermittent form, so often seen in insanity. Melody soothed him, as it so often does the insane, for

"Music hath charms to soothe the savage breast."

At other times, in his frenzy, he threw his javelin with an abandon which boded no good to the spectators, whether friends or foes.

Nebuchadnezzar was mad. With uncropt and unkempt hair; with uncut finger nails, until they were "like bird's claws" he dwelt among beasts and ate grass like an ox. He sought no shelter, for "his body was wet with the dews of heaven." He frequented desolate and solitary places and dwelt with wild asses. It is satisfactory to know that his understanding and reason returned to him, and that because of his recovery he "blessed the Most High."

We find the term "madness" mentioned in Ecclesiastes and Isaiah, and it is used synonymously with want of judgment.

It is worth noticing that the word "demon" was often used in the Old Testament times as being synonymous with "gods," "lords" and "vanities," or unsubstantial things. The Seventy in their translation give these interpretations. There is no doubt the idea was taken from the demonology of the heathen, in which is given distinct prominence to personal deities of good and evil. The ancient classic writers use the word as being equivalent to angels good or bad. The Israelites classified them in this way,—Angels were God's ministers, but demons, devils, unclean and evil spirits, rebellious and fallen angels were all emissaries of Satan. They were held to be foes of man and afflicted him physically and mentally. This was accomplished not only by external means, but also by taking possession of his body and becoming his tormentors. These demoniacal possessions seem to have been confined to the time of Christ and His apostles. At least the usual rendering of the Scripture narrative would lead us to believe in such personal occupancy by independent beings. The miracles of the casting out of such intruders would not have been less potent and wonderful had lunatics and demoniacs been classified together under the general term insane. Christ's miracles show that He attached as much divine power to an instantaneous cure of physical disease as to casting out devils. To cure a brain disease by word of mouth, or by laying on of hands, is equally supernatural and divinely potent, as was the raising of the dead. It would not be a difference in kind of potency, but only in degree of possibility. With the great advance of Biblical interpretation in these latter days, the hermeneutics of the future may lead to a view so consonant with medical and physical facts.

St. Mark gives us a graphic and terrible picture of a lunatic,—"And when He, Jesus, was come out of the ship, immediately there met him out of the tombs, a man with an unclean spirit, who had his dwelling among the tombs; and no man could bind him, no, not with chains; because that he had been often bound with fetters and chains and the chains had been plucked asunder by him, and the fetters broken in pieces; neither could any man tame him. Night and day, he was in the mountains, and in the tombs crying and cutting himself with stones." This poor fellow even had the delusion that Christ was tormenting him. What "with fetters and chains," cutting stones and lonely dwelling places, his lot was a hard one, but only a typical case of the many of his day.

This gives us a glimpse of how these poor diseased mortals had been treated in the beginning of the Christian era. To-day many lunatics in the poor-house of parsimonious municipalities fare little better.

The father described the symptoms of his epileptic son, when he said, "Lord have mercy on my son, for he is a lunatic and sore vexed for oftimes he falleth into the fire, and oft into the water." Such fared little better than their demon-possessed neighbors.

This demon (daimon), devil or angel, was well known to the Greeks in their mythology. Those having it were supposed to be diseased in a sort of way, through this demoniacal presence and influence. Socrates, the great

Grecian philosopher, said he was possessed in body and mind by an influence which he at one time called a *god*, at another a *demon*, and sometimes a *divine voice*. Under its influence he would go about the street half naked, dancing and shouting, at all seasons of the year. At these times of mental excitement he would make all kinds of grimaces, throw himself into grotesque postures, and know only occasionally the luxury of ablutions. In the midst of all this he would pour out torrents of eloquence, in scraps of wisdom, in cutting irony, and in biting sarcasm. At one time in a trance, and at another in convulsions, he was looked upon by cultured people and by his loving pupils as having a tormenting *spirit* or *demon* or *theos*, which spoke to him and was to him an inward monitor. Plato and Xenophon both testify to his vision-power, his insane pranks, intermingled with wisdom, but shrewdly hint at the purely physical origin of these fantastic doings. The voices he heard were doubtless hallucinations and his morbid ideas were evidently delusions. These facts, however show what the classic writers meant by the term "demon." It was not a personality but an innate and uncontrollable impulse based on physical disease.

Dr. Theodore W. Fisher, of Boston, read a paper on "The New Boston Insane Hospital."

Dr. CHARLES G. HILL. Everything looking to the advancement of the care and treatment of the insane is of interest to alienists. The report just submitted by the Doctor is worthy of being carefully studied and discussed. I have no doubt there will be found valuable features worthy of adoption. One step forward is his opposition to the removal of the chronic insane to one institution, and his idea of keeping them where there are physicians and attendants and nurses who are acquainted with them and form associations to which they have become accustomed. I feel that the next few years will see a great change in our ideas on this subject.

I know that the idea now-a-days is to separate the insane as far as possible: the acute in one ward, the chronic in another, and so on. I believe this is a disadvantage, and I think we will find it so. We can get better results if we allow them to mingle indiscriminately. The advantage to the insane who are chronic and who seem to be incurable of having other patients about them whose insanity is of a milder type is more than the disadvantage to the more acute cases. I often found it to work well in instances within my experience. I have known convalescent patients to form attachments for chronic patients and being constantly in contact with them and interested in them, their influence in more than one instance was the indirect cause of the recovery of these cases. I believe that in a few years we will change our views on this particular point, and will find it greatly to the advantage of cases to mingle more than we now allow them to do.

Another suggestion, in regard to the nomenclature of asylums.

He recommended that the name of the chronic insane asylum be changed simply to the Boston Insane Hospital. This is a good suggestion, but I think he could have gone further than that. It may be strictly correct to say an "insane hospital," as we have small-pox hospitals and fever hospitals, and why not insane hospital? We could just as well say small-pox physician, or fever physician or an insane physician. But would it not be better not to

call it a hospital for the insane? Technically it would be just as explicit to give our asylums titles that remove the stigma of insanity entirely from the name. Private asylums rarely use the word "insane" in connection with their titles. It would be better to call the establishment a home or retreat, instead of giving to it a name calculated to strike terror into the heart of the unfortunate creature who is committed to its walls. I think we should pay more attention to this subject. The word "insane" adds nothing to the force of the name at all. We could just as well call it by any other name than an insane hospital.

Dr. DEWEY. I want to express my great interest in the question of hospital construction which Dr. Fisher has studied and presented in the paper, and my agreement with the theories advanced.

We have reached a stage in the construction of institutions for the insane where very many new ideas are being introduced, all of them having their excellencies, and it seems to me that it is gratifying to see the adoption of new ideas and the progress which is being made in the study of the question of construction of institutions, with especial reference to adapting them to the needs of their patients. In former times it was too much the fact that a uniformity prevailed which did not take into account the very great varieties of condition among the insane, and, perhaps, as the result of the dissatisfaction with that fact there has been a reaction to the other extreme and yet this is all necessary and all in its way good, and it seems to me that there is being secured to-day a very much greater and better adaptation of means to ends in the construction of institutions, and that the matter is safely left to the individual conditions of each locality, and of each institution as its needs arise for extension; and as occasion arises for new institutions to be erected, there will be a continual advance in the methods of construction which will be exceedingly advantageous to the insane as a class.

Dr. KILBOURNE, of Minnesota. I come from a State which has had a peculiar experience in the erection of its insane hospitals. The first hospital erected in Minnesota was in 1866. It was not wholly fire-proof. In 1880, a part of the hospital burned down and several patients lost their lives. The next hospital was at Rochester. It had been an old inebriate asylum and was a fire trap. It was made a nucleus for the present hospital. Fortunately, it has not burned down. Last year we rebuilt a portion of it, this year we are fire-proofing more of it, and in time we expect to complete the task. The next hospital was built at Fergus Falls, and the Trustees wanted to make it a fire-proof building. The appropriation fell short, but they were obliged to go on and build. From necessity, the mill construction was adopted for a small part of it. I would state that that portion where mill construction has been used, is a matter of regret to the Trustees to-day. While it is far better than ordinary construction, it is not fire-proof, and I think the trustees of our State institutions now are unwilling to put up anything that is not *strictly* fire-proof. The Hospital at Rochester was built on what is called the slow-burning construction plan. The floors are planks, 2 by 8, nailed closely together, on which was placed grouting, then strips, the floor proper being laid on these strips. We are now asking for appropriations to remove this work. The timbers have rotted, and the walls have

a tendency to spread. The same construction was tried in the State Capitol at St. Paul, and a year or so ago the whole work was taken out. I think this Association should go on record as favoring nothing in the construction of hospitals which is not strictly fire-proof.

In regard to the naming of hospitals, I agree with Dr. Hill. While I do not want to criticise the name of any hospital outside of our own, I think the word "insane" might be left out of the nomenclature of our hospitals. In our State the hospitals have been named as the First, Second and Third State Hospitals of Minnesota. This year they have been changed to Rochester, St. Peter and Fergus Falls State Hospitals, following the plan in vogue in New York.

Dr. RICHARDSON. It happens that some of us in Ohio are more than usually interested just now in asylum architecture. For that reason I was very much interested in Dr. Fisher's paper, and in the plans which he outlined. For the purpose of illustrating our case, I should like to give a little description of what we contemplate in Ohio in the construction of a new institution.

The plans have not yet been adopted, and for that reason I, as one of the members of the Commission, would like very much to have suggestions either openly in the meetings of the Association or privately during the meeting this year from some of the members, because in the diversity of opinion we probably get the best average.

The purpose of the Commission is to give opportunity as fully as possible for the treatment of the acute insane, in connection with provision for the general class of chronic cases. We are committed in Ohio to institutions having certain territory set apart for them from which they must take all classes of insane. It is contemplated that provision will be made in this institution for one thousand patients. Of this number it is estimated that not over ten per cent. can be considered as presumably curable. The intention is to build upon the detached building plan, to provide a certain number of general cottages for the able-bodied chronic cases requiring simply custodial care, and, in connection with these, to provide for other cases requiring particular treatment. In the first place, there will be an infirmary for the unclean, demented and the bed-ridden and the sick cases of the terminal insanities, these being sub-divided so as to separate the unclean from the sick and bed-ridden class. There will be, in addition to this, a detention cottage, as it may be called, for the care of the most disturbed class of chronic cases, those who are chronically and continuously and inevitably disturbed, but who simply require some safe place for their detention. For the acute cases, or the presumably curable cases, for the recent admissions, it is intended first to have an observation cottage, or a reception cottage, with full opportunity for examination, bath and supervision during the time necessary for classification. They will be kept under observation there long enough to distribute as intelligently and as correctly as possible the patients to their right departments. The feature of the institution which we find most difficult to develop, which is most problematical at present, is the hospital proper, or, as we should term it, the mental hospital, where the individual treatment of every case that offers a possibility for recovery can be carried out. It is assumed that we must make provision for three general classes here. In the first place, those with

tendencies towards exaltation. Secondly, those with tendencies towards depression, including suicidal cases and cases of frenzy with melancholia. Thirdly, those that come in a broken down condition, exhausted, and confined to bed a large portion of the time, and where the physical condition is essentially the factor in the treatment of the acute insanity. It already appears, as far as the plans have been evolved, that we desire, in some general way to construct a building with probably three wings, or something of that character, where we could have in one the disturbed cases so arranged that they will admit of at least a sub-division into two classes. We assume that there will never be more than three or four cases in the institution at one time particularly noisy or disturbed, and we desire to provide for these cases so that they can be separated entirely from the other cases if necessary, and the most complete individual attention given to them without their coming in contact with any other portion of the institution.

The other portion of this wing will accommodate a larger number, some eight or ten possibly, of those less disturbed but who are still in such a condition as to be an annoyance to the other classes, and who require individual attention.

In another wing, somewhat similar, similar provision will be made for one, two or three cases of exceedingly disturbed depression, with opportunities for throwing this portion open so as to bring it in connection with the part containing the other classes, if that should appear desirable, or separating them, as occasion might require, while the general class of depressed cases would be provided with night supervision, and everything necessary for their care in the other portion of this wing. Then the other wing, with a few beds in it, and with one or two sitting rooms connected with them for the class that are not well enough to be out of bed all the time, and yet are in such mental condition as to appreciate their surroundings and to require careful individual attention. Then have suitable provision for sitting-rooms in the centre of this building so that these different classes can be brought together, as their condition justifies; and from this hospital proper, which in the entirety would not have in the five or six divisions a total accommodation for more than fifty patients, we would expect to distribute to one or two cottages, kind of half-way houses between the institution and the home, where they would be left largely independent, where they would be thrown upon their own responsibilities largely, looking after themselves, in their own way, and preparing their own food; as far as possible, bringing them back again to the responsibilities and environment of home life.

Now we are not sure that all this is possible, and I have briefly outlined it so that we may have the opinions of those of more experience in the treatment of this class, and, particularly your judgment as to whether this feature of a hospital in connection with an asylum for the general classes is advantageous or not.

My idea is that architecturally, as well as morally and medicinally, we should give opportunity for individual treatment wherever individual treatment will be of advantage, and that to do this we must use separation or association just as experiment determines it to be of advantage, and to do this we must

have certain architectural arrangements. I cannot agree with one speaker entirely, that the separation of those requiring special treatment because of the possibilities of such care upon their mental disease, from those who cannot be considered as requiring this special care, is not advantageous. I certainly think that we ought to do more than we have done heretofore. About as far as we have gone architecturally is to furnish a home, and this feature of the hospital, as far as architectural features go, has not made much development. Architectural features are important in insanity more than in any other disease, simply because the effect of environment upon the patient is greater than in any other disease. The patient brought into an ordinary asylum is put in the company of thirty-five or forty or fifty others, as the conditions of the institution may require, and the tendency is for the attendants, the assistant medical officers, and the superintendent to view that case as he views every other case in the ward associated with it (I don't say that this is right and that we all do this,) but the tendency is for that patient to get the same treatment that the other patients do who are associated with him. He may get less than he really requires because of this, or they may get more than they require.

The hospital idea, apart from the custodial part of the hospital, cannot be too much impressed upon the minds of those in charge of hospitals.

I was very much interested in the paper by Dr. Fisher, and I am quite sure that his new hospital will be quite a step in advance of nearly everything that we have in this country.

Dr. STEEVES. The paper of Dr. Fisher opens up a wide field for discussion, viz., that of providing hospitals and homes for the insane. Scarcely two of us will agree exactly in regard to details, whilst respecting general principles and plans there may be a good measure of harmony. Some gentlemen object very strongly to what they term separation of the insane and stigmatize the establishment of separate institutions for the chronic insane. I am not sensitive on this subject; indeed, I approve of the measure.

When I became superintendent of the asylum in New Brunswick seventeen years ago, the house was overcrowded; an addition was soon after erected, and in the course of five years another; accumulation went on, and the demand arose for more accommodations. Both the Commissioners and the Legislature began to ask themselves where this business was going to lead to, and they asked the question, "Is it necessary to go on every five years erecting a hospital and equipping it for the accommodation of this accumulating increment of the chronic insane?" "Why can we not," they asked, "provide for the harmless cases throughout the country in their homes and in association with the pauper classes?" Up to the period named, no such device had been thought out into action in the province of New Brunswick. It was easy for me to see this danger that threatened us, and a proposition was made and urged that a separation be made between the new and old cases; that a large farm be purchased for the latter class, pavilions of moderate cost be erected thereon from time to time, as required, and thus a colony system be established under the same management with the hospital proper, which would not be more expensive, and very much superior, to any hybrid plan such as had been mooted.

Happily for us, this proposition was favorably entertained and wrought out into material action. By this method we have always had abundant accommodation for all our insane, and have avoided the pernicious system which threatened us, and which has disgraced nearly every civilized country on earth. It is a puny objection, but often urged, that the hospitals are by this method robbed of their best workers, they being all carried off to the colonies. It is absurd to say that this must necessarily be the case, and in fact and indeed it does not so come to pass with us. The interests of both departments are considered by the management in the distribution of the classes. No iron rule or selfish practice can exist, because these matters and allocations are attended to by the same management and therefore unbiased, being no more interested in the one than in the other.

Dr. YOUNG. I have listened to Dr. Fisher's paper with a good deal of interest, especially that part of it which alluded to not separating the chronic from the acute insane. It seems to me from what experience I have had in the treatment of the insane that that would be injurious, not only to the chronic, but the acute insane. It is a well-known fact among those who have charge of Western and Southern asylums that appropriations for taking care of the insane are very meagre, and by the assistance we can get from the chronic insane we are enabled to give the acute insane a great deal better treatment and care than we would otherwise be able to do. In my hospital I have seen chronics or incurables who are quite as serviceable to me in the treatment of the insane as anybody I can hire, and still they are not sufficiently well to maintain themselves in the battle of life. I have some chronics that can take care of feeble insane, who take them out in the grounds and give them the necessary exercise and they are as careful with them as any person in my employ can be. I think in removing the chronic insane from the acute, the great injury would be to the acute and no benefit whatever to the chronic.

As to the construction of a hospital, the hospital of which I have the honor of being superintendent, is built on the pavilion style connected by corridors, and the pavilions are echelon to the rear. I do not think that the congregate asylum can be built on a better plan than that of the institution of which I am superintendent. It is three stories high and the entire building is connected together by corridors, and also with the centre building by corridors, and there is a corridor running the whole length of the centre building in the rear, and these corridors are only for egress and ingress, and they furnish sufficient light and ventilation; and we get rid of all the bad odors and a great many other inconveniences that I find when I visit some of the older asylums. The asylum at Buffalo is built very much like ours, except that my recollection of Buffalo is that the upper stories of the asylum are not connected with each other by corridors. We have corridors running from the top to the bottom. Our asylum is built on the slow combustion plan. In the first story the joists are nailed together. They are two inches thick and twelve inches wide, and they are nailed together on the first floor. The other floors are built in the ordinary way and planks are nailed along upon the joists. We have our basement cemented and drained with tiling. Now I think that when our asylum gets

full, and I believe that is the proper way to construct all asylums, that is to build detached cottages on the colony plan, I think that when the hospital gets several hundred in it, that a certain number can be picked out and a little cottage built off by itself and use the main building for administration only. Have everything else separated from it. Make the cottages as homelike as possible.

If I understood Dr. Fisher rightly, he said something about a basement kitchen. I cannot think of a more objectionable feature in an asylum than a basement kitchen. I want all kitchens and laundries, and bake-shops of the asylum that I have anything to do with entirely disconnected from wards, and administration buildings. We have them so in our asylum. If I could I would have no dining-rooms on the wards. Another thing I would do in a great many of the rooms, I would have special lavatories. We have many patients in the asylum who could have a washbowl or looking-glass in their rooms just as well as you or I. And this idea of having a common lavatory is a bad thing except in case of dements. There are many chronic patients who could be treated in a room provided with a wash-stand, comb and brush and looking-glass and everything that is necessary. And I would so construct an asylum as to have as many lavatories properly equipped as there were patients in the ward. I would have an asylum constructed so that the physically sick could be separated from the others and have proper nursing, and be treated as they are in general hospitals. I very much admired the paper, and I thank the doctor for his instructive description of the new hospital.

Dr. FISHER. I would like to answer some of the questions that have been asked, and I will do so very briefly.

I would like to ask the size of the floor timbers and the thickness of the floor in the so-called mill construction building.

Dr. KILBOURNE. I don't remember, but they use very hard and heavy timbers. The foundation floor is two inches thick and there is inch pine on top of that. I believe it is the intention to fill in the spaces. These timbers have not rotted out. The slow burning construction employs timbers 2 by 8. This is the worst construction that could possibly be had in a hospital. The mill construction I believe is all right, so far as construction is concerned.

Dr. FISHER. In view of the frequency with which fire-proof hospitals have burned down in recent years I think it would be well to look into this matter of fire-proof construction.

I think two stories high is high enough, and in case of fire this would be a great advantage. The guards on the windows will be very light so that a patient could easily get out and drop one story and find himself entirely safe. There is absolutely no surface to take fire, except the under surface of the basement floor supported by heavy beams, the basement being entirely made of brick and stone, the other walls being covered by cement, and solid so that no fire can go through from one story to another. It strikes me that any fire in such a building could be long enough delayed so that all the patients could be gotten out in time. That is the important point.

Dr. Richardson's very able presentation of his plans for the future in Ohio

was admirable and very well thought out, and I hope that he may be able to carry them out to the very fullest extent.

I agree with what Dr. Steeves said in regard to the fact that legislatures are willing to give money for asylums for the chronic insane when they will not give money for hospitals.

In regard to the basement kitchen, it is not in the basement of the hospital proper, but simply under the dining-room, which is not so objectionable.

The SECRETARY. Dr. Blumer asked me to call attention to the International Congress of Charities, Correction and Philanthropy which meets here next week. One section is devoted to the subjects connected with insanity and a very large number of papers will be presented by eminent members both abroad and in this country. The sessions will be held in the Art Palace on the Lake Front.

A section is also devoted to Hospital Care of the Sick, First Aid to the Injured, Training Schools for Nurses, etc.

Dr. Blumer suggests that it would be well for those who will be here next week to attend those meetings.

After to-day applications for membership cannot be acted upon, because they must be acted upon by the Council and reported to the Association one meeting prior to the meeting at which the ballot is to be taken.

I would also announce that Dr. Prince, of Chicago, who has published an excellent Manual on Fire Protection in Institutions for the Insane, has offered to give a copy to every institution for the insane in this country, with the proviso that the Association shall distribute the copies. The Council accepted this proviso night before last and the Council will proceed to distribute a copy of this book to each institution for the insane throughout the country.

Dr. DEWEY. There is one matter which I have been requested to announce, in connection with the meetings of the Congress. It is about the meeting of the National Conference of Charities which begins to-morrow night and lasts up to Sunday night. It is an organization composed of those interested in all forms of charitable work throughout the United States and Canada, and it is familiar to many of us, and it is likely that matters will come up of interest to the members of this Association. This being the twentieth annual meeting, which occurs in the Columbian year, occasion has been taken to present an historical programme, and a retrospect of the progress in the different departments of work. And there will be a report from the committee on Insanity, of the progress made during the last twenty years in the care and treatment of the insane. All members are invited to attend the sessions, which will be held in the Memorial Art Palace.

The next paper was a "Clinical Account of Three Cases of Speech Disturbance," read by its author, Anne C. Burnet, M. D., of Manitowoc, Wis.

Dr. HURD. We ought to congratulate Dr. Burnet and the Association upon the fact that she is the first lady member of the Association to present a paper here, and I think we ought to be extremely gratified that the paper has been in all respects so interesting and the clinical details so admirably worked out. I hope that the other women, who belong to the Association, will

also come forward and take part in our discussions. I congratulate Dr. Burnet upon the excellent paper which she has presented.

Dr. RICHARDSON. I should also like to say a word in congratulation to Dr. Burnet. It is a very commendable sign, indeed, that her first effort has been in the direction in which possibly we need more attention than any other, that is, the study of everything which gives evidence of focal lesions in connection with mental disease. There is nothing which gives this more surely than speech disturbance and the physical basis of insanity is the point we must always bear in mind. Anything that assists us in the determination of it is of paramount importance. I was also very much impressed with what the Doctor mentioned in her paper about the fact that she was unable to obtain autopsies in cases where it would have been desirable, on account of the opposition of friends.

I think that the State has a certain right in the matter in return for the care given the patient. I think the State is justified in demanding the privilege of having an autopsy decently conducted in cases where it would be desirable. I think the friends would not object when they saw that a decently conducted autopsy does not do damage to their prejudices. We all know that this examination can be done so that an expert would hardly determine that an autopsy had been made. And there is no reason why there should not be a law permitting that in every case where it is justifiable an autopsy can be performed. I hope this Association will take action upon the subject, and bring our influence to bear collectively or individually.

Dr. YOUNG, of Missouri. In Missouri we do not need any law in that direction. We can make an autopsy whether it is a pay patient or a State patient. There is no law in Missouri on the subject of autopsy, and we frequently make them in our asylums. Sometimes we have a little trouble with friends, but there is no law to prevent us from doing it.

Dr. KILBOURNE, of Minnesota. While I agree with Dr. Richardson that there ought to be a law of that kind, I think that such a law will herald the millenium. I don't think we can get it in our State. I would not dare to hold autopsies upon all our cases, for I think there would be an upheaval in our hospitals if we did. There is a law about turning over those of our dead who are unclaimed. In most of those cases where we have received word to bury the dead we manage to hold autopsies.

Dr. HILL, of Iowa. I was very much interested and pleased with the paper, and Dr. Burnet deserves credit for it.

In regard to autopsies, I don't think in our State there is any law to prevent them, but in my institution I always make it a point to make them without asking permission to do so. We have made them very carefully, and I don't remember a single instance where the discovery was made that an autopsy had been performed.

Dr. RICHARDSON. I am glad to see that the millenium is approaching.

Dr. HILL, of Iowa. The institution is located in a small town and most of the relatives live a good many miles away.

On motion of Dr. Gilman, the Association adjourned at 1:15 P. M. until Thursday morning at ten o'clock.

The fourth and last session of the Association was called to order on Thursday morning, June 8th, 1893, at 10.10 o'clock, by the President, Dr. Andrews.

Dr. Hurd presented a report from the Council, as follows: The following persons have been recommended for active membership: Drs. E. B. Potter, Rochester, N. Y.; L. J. Adair, Anamosa, Iowa; E. D. Bondurant, Tuscaloosa, Alabama; and John R. Brown, Indianapolis, Ind.

For associate membership: Drs. M. N. Volding, Independence, Iowa; W. E. Wright, Harrisburg, Pa.; and W. O. Porter, Meridian, Miss.

On motion of Dr. Hill, of Iowa, the Secretary was instructed to cast the ballot for the gentlemen whose names had been read, who were all declared elected.

Dr. Gilman, from the committee appointed to consider the matter of politics in asylums, made the following statement:

Mr. President, and Gentlemen of the Association:

Your Committee appointed on the President's address with its recommendations in the matter of politics in asylums, upon considering the matter, have felt that in a subject so important we should have more than a day or two to present such a report as the Association would be willing to accept and to stand by for all future time. It covers so much ground and the matter therein contained is so important to all the institutions of this country, that we have felt that we should be able to have such time as may be necessary to counsel with the members of the Association from different sections of the country to familiarize ourselves with those States that have taken advanced steps in this matter, and thus be enabled to present a report which shall be something of more value than simply so much verbiage on paper, and that shall be a help to everyone of the institutions in this country, and that shall be a help to the unfortunate of this country whose institutions have been imperilled by political measures. By order of the Committee of which I am chairman, I am requested to ask, if the Association has confidence enough in the Committee, that we be allowed sufficient time, perhaps two or three months, in order that we may correspond with the different members of the Association in different sections of the country, and adopt such a report as will harmonize all the interests of the Association and be of benefit to all the members of the Association and the interests which they represent. There are some of us who are now upon the era of what may be similar disasters as have overtaken some of our most eminent members, and we feel that we ought to have the moral support of this Association before another meeting can be held. If it is the sense of the Association, it is the suggestion of the Committee that they formulate this report, taking what time is necessary for that purpose, and present it to the Secretary of the Council, who will present the matter to the Council of the Association, and we will abide by their decision, whether it shall be accepted or rejected. If the Association will also abide by this decision, we will be highly gratified.

Dr. DEWEY. I will move that such action be taken by the Association as has been outlined by Dr. Gilman in his remarks, viz.: "That the Committee named be given such time as they think necessary to get together facts and

statements which they consider important for their report and shall prepare and present it, through the Secretary, to the Council, upon whose approval it shall be considered as acted upon and approved by the Association and may then be promulgated."

The motion of Dr. Dewey was seconded by Dr. Hill, of Iowa, and unanimously adopted.

Dr. Fisher reported from the Committee on Medical Education, as follows:

Gentlemen of the Association:

Your Committee to whom was referred that part of President Andrews' address relating to instruction on mental diseases in medical colleges beg leave to report the following resolution for adoption:—

Whereas, This Association resolved in 1871 that lectures both clinical and didactic on insanity should be given in all medical schools and that no students should be allowed to graduate without a thorough examination on this subject, and

Whereas, It is shown by your President's carefully prepared statistics that instead of five schools in which such instruction was given previously to 1871, there are now 95 out of 141 medical colleges of this country in which lectures either clinical or didactic, or both, are given.

Resolved, That this Association re-affirm the second portion of their former resolution and recommend that instruction and examination in mental diseases be made a condition of graduation in all medical schools.

(Signed), THEODORE W. FISHER,
G. ALDER BLUMER,
J. B. ANDREWS,
Committee.

On motion of Dr. Gilman, seconded by Dr. Hill, of Iowa, the report read by Dr. Fisher was adopted.

Dr. ANDREWS, the President. I hope that the second part of the resolution may be sent to all the medical colleges in the United States, and especially to those instructors in the medical colleges who have been superintendents of institutions or are now such, and who may be able to forward the objects of the resolution.

The Committee on Training Schools, I would state, desires to have further time to prepare a report.

Dr. PAINE. I wish to report from the Committee of the Association on Photographs.

You will recollect, that this committee of which I was the sole member, was appointed at the meeting of 1890. Subsequently, photographs were obtained from as many as possible of the active and past members of the Association until one hundred and seventy-six were gathered together, when a contract was made with the Boston Photogravure Company, afterwards known as the Art Publishing Company. They printed two hundred copies of this "group picture" because they were willing to print two hundred for the same price as one hundred copies. I paid them $409.83 for their work. The circulars that were sent to the members of the Association and others, with postage

and actual expenditures, have caused a further outlay of $25.83 by the Westborough Insane Hospital and $13.82 by me, making a total expense of $449.48. The income from the sale of pictures has been $384.00. That leaves a balance due me at the present time of $65.48.

It may be well also to mention the price charged for them.

It seemed to me probable that one hundred could be sold. The price was then placed at four dollars each, with thirty cents additional for a mailing tube and four cents for postage. Ninety have been sold on those terms; and I shall furnish to the Secretary, within a few weeks, the name of every purchaser, as well as my expense account.

I make this announcement at this time, in order to notify the members of the Association that I still have some for sale which can be obtained for $4.34 each.

Before closing this report, may I be permitted to refer to the remaining one hundred unsold pictures? What shall be done with them? It will be equally pleasant to me to deliver them to the Secretary, or to retain them and continue my efforts, as the Committee on Photographs, to sell them, even at a lower rate if it seems best, and deliver the proceeds to the Treasurer. But it seems to me that we have in our power the performance of a generous and fraternal act, and it is my suggestion that most of the pictures left unsold should be presented to societies, institutions and distinguished physicians of our specialty in foreign countries.

Upon motion of Dr. Kilbourne, a vote of thanks was tendered to Dr. Paine for his work.

Dr. Burr offered the following resolutions:

Resolved, I. That the members of the American Medico-Psychological Association who are identified with institutions for the insane from which reports are issued be requested to incorporate in the statistical tables of their respective institutions tabulations designed to set forth—

1. The duration of life in the insane.
2. The permanency of recoveries from the various forms of mental disease.
3. Length of interval of mental health between attacks of mental disease in patients discharged recovered.

Resolved, II. That a committee of three members of this Association be appointed to prepare forms of statistical tables which shall embody these recommendations, to report to the Association at its next meeting.

Upon motion of Dr. Richardson, seconded by Dr. Young, of Missouri, the resolutions were adopted.

Dr. Young. I think it would be well for the Doctor to include in his resolutions something to the effect that some notice be given or some form sent to the different institutions immediately. Can you include that in the resolutions?

Dr. Burr. I think that is already contained in them.

Dr. Andrews, the President, then appointed Dr. Burr, Dr. Wise, and the Secretary, Dr. Hurd, as a Committee on Statistical Tables.

Dr. Burr read a paper entitled "Paranoia with Delusions of Change in Sex."

Dr. D. R. Brower, of Chicago, read a paper, on "First Care and Aid of the Insane Pending More Permanent Arrangements."

By way of introduction to his paper, Dr. BROWER said: It affords me very great pleasure to be able once more to meet with the Medico-Psychological Association, the successor of the Association of Medical Superintendents of American Institutions for the Insane. It was my great pleasure to meet with that body a number of years in succession. It was a long while ago, and as I look over the faces of the gentlemen present I recognize but few of those with whom I had such delightful associations then.

The paper which I have brought here for consideration is not for the instruction of any members of this learned body, but it is presented with the hope it may give rise to discussion and thus formulate more carefully and more correctly than has hitherto been done what should be first done, in the beginning of insanity, so that we may treat patients wisely before we can make the necessary arrangements for the institutional treatment of the insane patient.

At the close of Dr. Brower's paper, Dr. WISE said: I merely want to say a word in commendation of the paper, and it is to be regretted that it will not reach the class of practitioners who would be chiefly benefited by it. I want to protest, however, against stimulating the general practitioner to use hypnotics and sedatives in incipient and early cases of insanity. It is their tendency now to use them to excess in such cases, and in the hospital with which I am connected one of the first therapeutical acts that is practiced by the attending physician, is to eliminate the bromides, chloral, sulphonal or other sedative with which the patient is often saturated. I think it will be admitted by all the asylum men here, that there is a great and dangerous tendency to reduce the excitement by the use of sedatives and hypnotics which are sometimes used to an alarming degree. I merely wish to condemn this practise, and I think this precaution may be very appropriately expressed in connection with Dr. Brower's paper.

Dr. ANDREWS, the President. It occurs to me that the great danger is that the friends of patients do not take the advice which the doctor gives. The trouble is that they drench the patient with sedatives, and instead of giving them to produce sleep alone, they give them constantly during the day and night so as to put them under complete control, and are not satisfied with giving sufficient to procure sleep. I think that is the great danger in general practice.

Dr. Paine read a paper entitled "Instruction in Psychiatry in American Medical Colleges."

Before reading his paper, Dr. PAINE said: Last December I received a circular from the New York State Commission in Lunacy, as doubtless many of you did. I wrote to Dr. MacDonald, saying that I thought the matter ought not to end there and asked him if he intended to do anything more, and he replied that he did not intend to do so. I thereupon prepared two circulars, one to the deans of medical colleges and the other for medical superintendents of asylums. I received a reply from Dr. Andrews, saying that he already had possession of the field and had done a great deal of work in

that direction. I felt that I ought not to withdraw, inasmuch as all the circulars had been sent out, and I went on and completed the task.

I shall only read a portion of this paper. However, the figures are not the same as those given by Dr. Andrews.

At the close of the reading of Dr Paine's paper, the President, said: I was particularly gratified with the close similarity of the statistics which the doctor presented and those secured by myself, and I think we have pretty nearly got at the facts of the case. The whole showing is especially gratifying to this Association which took the first steps in 1871 towards introducing education in psychiatry in medical colleges.

Dr. HILL, of Maryland. I should think it well for the association of medical colleges to make it obligatory upon all colleges to teach psychiatry and to have a special chair to teach and examine upon that subject.

Dr. YOUNG, of Missouri. I was pleased with the suggestion that the medical societies which are remote from medical colleges meet at the asylums to see cases of interest to the profession. It seems to me that all asylums, no no matter how remote from medical colleges, might avail themselves of this plan.

Dr. Daniel Clark, of Toronto, read a paper entitled "Swallowing Foreign Bodies." Dr. CLARK said: I am sure you will be glad to hear that I have no intention to inflict upon you the paper, whose title has been printed on the programme, on "Physiology in Thought, Conduct and Belief." I wrote the paper, and it was so lengthy and unsatisfactory to me, I thought that, like wine, it would improve with age, so I thought I would keep it for some future occasion when it might be more acceptable.

I will give an account of a patient of ours who performed a remarkable feat, as well as a unique one. The patient swallowed a table set, being the knife, fork and spoon, turning his stomach into a small shop.

After Dr. Clark had read the paper, Dr. GILMAN, of Iowa, said: I believe this is the first instance that I have heard reported where all the table cutlery was swallowed and the Queen's-ware was inhaled. But we had one instance in our institution of a female patient who swallowed a similar fork, a four-tined silver plated fork. The fork was missing and could not be found and a search was made for it. This patient asserted that she had swallowed it. It was reported to me and the supervisor said that she could not believe the patient, but I told my assistants to watch the patient carefully. There was no complaint for several weeks, but then there was some uneasiness in the region of the stomach and by examination it was found that there was a hard substance there. An operation was performed in season to save the patient's life.

Dr. KILBOURNE. It seems to me that the relatives of the patient to which Dr. Clark referred should be held responsible for his death by refusing to allow an operation to be performed. I have a patient in our institution today who has an abdominal tumor, and the parents have been appealed to to allow an operation, but the only answer we have had is to let "Nature take its course." Inasmuch as Nature seldom cures such cases, it seems that death will be caused by the tumor. There should be a law empowering us to act in such cases.

Dr. Steeves read his paper entitled, "Remarks on Classification in Mental Diseases, with Special Reference to Monomania."

Dr. H. P. Stearns read an obituary notice of the late Dr. Pliny Earle.

Dr. STEARNS said: I may remark as explanatory of the meagre notice of Dr. Earle which I have prepared, that in writing to the hospital where he was so long superintendent I was unable to obtain any data in reference to his early life. I was informed, however, that all his papers had been left in care of Mr. F. B. Sanborn, and that Mr. Sanborn was absent from the country. I am indebted to Dr. Earle's nephew for a copy of the Worcester *Gazette* from which I was able to obtain some of the information desired.

Dr. Howard read a paper entitled "Insanity in its Relation to Menstruation."

Dr. Field read an obituary notice of Dr. Henry Hunt Stabb, of Newfoundland.

Dr. Gorton read an obituary notice of Dr. Theodore Dimon.

Obituaries of Dr. Henry M. Harlow, prepared by Dr. Sanborn; of Dr. Charles E. Wright, prepared by Dr. Rogers; of Dr. W. H. Stokes, prepared by Dr. C. G. Hill, and of Dr. R. J. Patterson, prepared by Dr. Dewey, were read by title, and upon motion were directed to be published.

The Secretary reported that at the meeting of the Council it was decided that the next annual meeting of the Association, being its semi-centennial, should he held at Philadelphia, on the third Tuesday in May, provided it does not conflict with the meeting of the American Medical Association, and that Dr. Curwen, the President-elect, Dr. Chapin, Dr. Hall, Dr. Moulton and the Secretary had been appointed as a Committee of Arrangements.

The PRESIDENT. I congratulate this Association at the close of this meeting: on the large attendance, on the strict attention given to the work of the body, and on the high order of the papers that have been read before it.

I also desire to thank the Association for the courtesy extended to me and to say again that I appreciate the high honor that has been conferred upon me in calling me to preside.

I now have the pleasure of introducing to the Association its President-elect, Dr. John Curwen, of Pennsylvania.

Dr. CURWEN. I feel like returning my cordial thanks to the Association for this honor conferred upon me, in choosing me to the high position of President. I hope that I may be able to discharge the duties of the office, aided by your kind encouragement, as satisfactorily as my predecessors have done.

If there is no further business to come before the Association, the Association stands adjourned until the third Tuesday in May, 1894, to meet in Philadelphia, to celebrate the semi-centennial of the Association.

Adjourned at 12.25 P. M., June 8, 1893.

ABSTRACTS AND EXTRACTS.

SCOPE AND LIMITATIONS OF CEREBRAL SURGERY.—Dr. Kirchhoff has contributed to the *Therapeutische Monatshefte* an article on this subject. He enumerates the varied conditions for which operations on the head have been proposed or carried out, and indicates the reasons for and against operation in each one. Intra-cranial abscess, for example, is a condition in which the advisability of operative interference is not to be disputed, whether the abscess be due to traumatism or result from ear disease, and operation should be carried out as soon as the diagnosis is made. With regard to intra-cranial growths it is never easy to foretell whether a tumor producing certain symptoms is removable or not. Superficial encapsulated growths are naturally those offering the best opportunities, whilst deeper and more extensive ones do not present the same chance of recovery afterwards, and on account of the destruction of tissue and the risks from hæmorrhage the operation itself is a formidable one. Epilepsy when the result of localized lesion of the cortex is practically the only form of this disease in which a good result is to be anticipated from operation. Hernia cerebri, Dr. Kirchhoff thinks, may be removed if situated anteriorly, as no paralysis appears to follow. It may also be possible sometimes to remove a small one posteriorly. Of course, a condition such as hæmorrhage from the middle meningeal artery, if a result of injury, must be treated by trephining, and the same is true of the similar condition associated with pachymeningitis, although it is not easy of diagnosis. The large serous effusions associated with tuberculous meningitis, cerebral tumors, etc., have been evacuated by trephining and puncture, and such an operation may, at least temporarily, relieve the patient. It is doubtful whether trephining for cerebral hæmorrhage would be practiced even if the difficulty in diagnosing between that condition and softening could be overcome. Headache, if the pain be localized to some distinct tender point, offers a good opportunity for relief by trephining; but permanent benefit from operation in mental disease has still to be obtained.—*Lancet*, July 8, 1893.

G. G. A.

AN EPILEPTIC CANARY.—M. Féré tells us (*Société de Biologie*, June 8th) that epilepsy is not unfrequently met with amongst birds. Hitherto, however, only two such examples have been recorded in detail. M. Féré has recently had under observation a canary thus affected. The attack commenced suddenly with a kind of aura, the bird extended its wings. This movement was followed immediately by a turning of the head to one side and then the animal fell. Generalized tonic spasms were then succeeded by clonic spasm, these stages being followed by a period of stupidity, often accompanied by impulsive acts. For example, the bird would peck at a table on which there was nothing to peck at. Here is seen reproduced the *tableau clinique* of a typical attack as observed in the human being. But what is particularly interesting is that the attacks were successfully con-

trolled by the administration of bromide of potassium. This mode of medication is, it appears, quite feasible in the cage; it suffices to dissolve the part in the drinking-water in the proportion of one per cent. This dose may be continued for long periods; a stronger dose induces bromism. *Lancet*, June 24, 1893.

The London *Lancet*, June 24, 1893, records the establishment of an out-patient department for mental diseases in conection with St. Thomas's Hospital, London. Dr. Rayner, a former medical superintendent of Hanwell, is in charge. The *Lancet* comments as follows: This "marks a new departure, supplying a want that has long been recognized. The statistics of admission to asylums show that in a large proportion of cases the mental symptoms had existed for upwards of three months; consequently there must be in the population at large, at all times, a great number of persons in a stage of disorder most amenable to treatment and of the greatest interest from a clinical point of view.

The existence of this out-patient department cannot as yet be widely known to the classes whom it is intended to reach, but the experience of the few months in which it has been in operation has proved that a considerable number of persons are ready to avail themselves of the opportunity offered them and that a great amount of benefit can be derived from the treatment."

That this advance in the treatment of the insane in London will be attended by success there can be no doubt. This has been already demonstrated by the experience of the Pennsylvania Hospital, which has had a similar out-patient department in operation for eight years. In the last report of the Department for the Insane, this extension of its charitable work is thus commented upon: "At the Out-Patient Department, Monday and Friday, of each week, are designated for mental cases. The physicians of the department for the insane attend in rotation for the purpose of giving advice and imparting information to persons who are suffering with supposed premonitory symptoms of mental disease. This service was established in November, 1885.

It is believed that in a population of one million there are many who may be relieved during the incipient stages of nervous exhaustion that often precede mental disorders, and that further development may be arrested in the cases of those, who from ignorance or indifference to the warnings, neglect or are unable otherwise to procure proper advice. We are assured that of the number who have presented themselves, although it is not as large as was anticipated, many have been cured or relieved by timely aid and saved a prolonged stay in some hospital. It is important that the community, and particularly the medical profession, be informed of the existence of a gratuitous service of the kind referred to, that is available to worthy persons who are poor." F. P.

THE TECHNIC OF THE COLORING OF THE CYLINDER AXES IN THE NERVE CENTRES AND PERIPHERAL NERVES.—Stroebe, *Cbl. f. Allg. Pathologie*, 1893, No. 2. The following is M. Stroebe's method of coloring the cylinder axes:

The pieces are previously hardened in Mueller's fluid, then in alcohol. The sections of the thickness of ten microm., are fixed in celloidine and then placed in a saturated solution of aniline blue for half an hour. They are then washed in absolute alcohol, to which from twenty to thirty drops of a one per cent. alcoholic solution of caustic potash has been added. This done, the sections are washed in distilled water, then put for fifteen or twenty minutes in a concentrated aqueous solution of safranine, which has been diluted with an equal quantity of water. Then they are treated with alcohol to free them from their excess of water and mounted in the ordinary manner.

In the sections thus made the cylinder axes are colored dark blue; this tint encroaches a little on the myeline sheaths; the nuclei and connective tissue elements are colored red.

This method is claimed to be especially convenient for the study of nervous degenerations.

Cranial Deformities of Criminals.—P. Naeke, *Arch. f. Psych.*, XXV, p. 227, reports very elaborate comparative measurements of the crania of sixteen females, twelve of whom were of the criminal class, and two were prostitutes. The results are given in detail in tabular form. He finds in this series all sorts of abnormalities but thinks that they are not more common than in the insane and probably in normal individuals, and sees in the findings no special support for the view that a "criminal type" exists. Any atavistic signification of these abnormalities, he holds, must be admitted only with the greatest caution and reserves.

The numerous pathological findings in these cases, he thinks, are easily explainable by the fact that the majority of male and female criminals come from the lowest classes, among whom defects of nutrition and all kinds of excesses are most common and must affect them even before birth. Then the hard conditions of childhood and later life affect their development and leave their traces in the organism, and these, together with their associations, lead them into the criminal life.

The Insanity of Negation.—Dr. E. Toulouse, *Bull. de la Soc. de Méd. Mentale de Belgique*, No. 68, March, 1893, reports a case of the *délire des negations* occurring very early in an attack of melancholia, within six months of the first symptoms of mental derangement. The patient, a female, had a strong hereditary taint, but had always been fairly healthy, without being actually robust. She was rather irregular in her menses and had three pregnancies, only one of which reached its termination, but there were no traces or history of syphilis. Her mental health had previously been very good.

The insanity appeared after a consultation in regard to some abdominal pains for which the possibility of an operation had been suggested. At first it seemed to have the character of an anxious melancholia, with temporary refusal of food, and some suicidal ideas, which, however, she lacked the will to carry out.

The clinical picture when examined by Dr. Toulouse was that of the insanity of negations as described by Cotard, but instead of being a late manifestation or phase of melancholia it was, as has been said, an early one. The physical symptoms were, however, rather those of long standing melancholia than of its early or acute stage. There was a certain degree of *embonpoint*, digestion and appetite fair, skin healthy, some general slight anæsthesia of parts of the body such as is common in certain conditions of melancholia, and which is especially so in the insane deniers (Cotard).

The case, Dr. Toulouse considers, is instructive as showing that the insanity of negation may appear as an early as well as a late episode of melancholia. He believes that the importance of heredity is over-estimated as a rule in these cases, and that it is more probable that the nature and disposition of the lesions of sensibility so frequent in melancholiacs, are the conditions that favor the early or late appearance of these symptoms.

It also indicates, in his opinion, that the insanity of negation is only a syndrome and not a vesanic entity, as held by Falret and others, and that the establishment of varieties of this type, of progressive evolution, like those of persecutory insanity, would be to push the analogy to the extreme, and to invent morbid species out of nothing from an unconscious desire to introduce symmetry and harmony into the classification of mental diseases.

He says, "It is simpler and probably more correct to consider the *délire des negations* as a syndrome that shows itself most frequently in melancholia because it there finds the proper psycho-physiological conditions for its appearance, but which may occur elsewhere, and notably in certain forms of persecutory insanity. It seems to graft itself upon sensory disturbances which need to be thoroughly studied when they are encountered. When it shows itself in a vesania it is very aggressive, or encroaching, like the parasitic plants that finally cover and veil their supporting tree; and it thus comes to play a predominant part in the insanity of the individual patient and to justify by the psychic disorders to which it gives rise, the attention that has been accorded to it by observers.

ALTERATIONS OF THE CORTEX IN MENTAL DISEASES.—R. Cortelli, (Acad-des Sci., Paris, 1893) abstract in *Bull. de la Soc. Ment. Méd. de Belg.*, formulates the following conclusions:

(1) In progressive general paralysis, with syphilitic infection, the histological alterations affect especially the blood vessels, the neuroglia cells, also the cellular protoplasm and the protoplasmic elongations of the nervous elements. The cylindrical prolongations are destroyed in only a few elements and then at a late stage. The changes begin essentially in the vascular network.

(2) In paralytic dementia with alcoholic intoxication we observe clearly a hypertrophy of the arachniform cells and various phases of regressive disturbance of nutrition in the nervous prolongations, and also rudimentary alterations in the protoplasmic elongations. The blood vessels, however, are intact.

(3) In alcoholic insanity the histo-pathological examination reveals the existence of an essentially parenchymatous alteration of the nervous prolongation with a hardly appreciable participation of the ganglionary bodies and the protoplasmic ramifications. The neuroglia and vessels are intact.

VISUAL DISORDERS IN MENTAL AND NERVOUS DISEASE.—The following abstract of recent papers on ocular troubles in connection with nervous disorders (Asthenopia and concentric contraction in nervous diseases by Koenig;—Optic hyperæsthesia of central origin, by Freund;—Disorders of color vision in traumatic affections of the nervous system by Wolffberg; *Jour. de Méd. de Bruxelles*, 1893), is taken from the *Bulletin de la Société de Médecine Mentale de Belgique*, March, 1893.

According to Oppenheim we find contraction of the visual field in traumatic neuroses, and this symptom is the surest means, according to some authors, to detect simulation that is so common in these affections. According to other authorities this symptom is valueless or infrequent. Only by further researches can this point and others equally obscure in the history of traumatic neuroses be cleared up. There are, moreover, in this affection still other visual disorders, among them fatigue of the visual field, a chief symptom of nervous asthenopia, to which Koenig here calls attention.

What is understood by fatigue of the visual field? In examining with the perimeter the extent of the visual field in certain disorders we find as we measure a new meridian that the field is more and more contracted. At the end of the examination it is normal or less than it should be.

Let it be assumed that in examining the signal is carried in the same directon for all the meridians, successively, passing, for example, always from the temporal to the nasal extremity. Foster has observed that, proceeding in this way in individuals suffering from nervous asthenopia or more particularly from fatigue of the visual field, we find this field contracted, but this contraction is much more marked on the nasal side of the eye when we finish the examination of the successive meridians. Reciprocally, when we study the visual field, starting from its nasal side, we find the temporal visual contraction most marked.

Wilbrand has simplified this rather laborious method, he examines only one of the meridians of the eye. Starting on the temporal side, he carries the signal toward the nasal side of the eye. Let 1 be the point where the signal enters the temporal visual field, and 2 the point where it leaves the nasal visual field. He then passes it backward over the same route and finds that the subjects of nervous asthenopia lose the signal before it reaches 1, then, returning toward the nose, it is lost again before it reaches 2, and so on.

This symptom is observed in the most different disorders (psychoses, paretic dementia, organic brain disease, hysteria, epilepsy, neurasthenia) and especially in traumatic affections, notably the traumatic neuroses.

The origin of these ocular troubles is not decided; do they correspond with a retinal lesion or one of the central nervous system? Wilbrand is inclined to a peripheral origin. Whatever it is, they have a great value in the detection of simulation in the neurosis; it is impossible to simulate these symptoms to one with an extensive knowledge of ocular examination.

In some patients affected with functional disorders of vision, instead of a contraction of the visual field we find an increase; not only for the white but to some extent also for other colors. The examination of these patients should be made under certain conditions indicated by the author; their eyes are quickly fatigued, and many of them present Forster's symptom.

All these patients were seen shortly after the injuries (some days or weeks): the visual acuteness was good: and they distinguished colors fairly. The primary increase of the visual field is followed after a time by contraction; the visual acuteness remaining still longer, at the same time with the ocular hyperaesthesia, there is hyperaesthesia of other special senses, hearing, tact; the patients exhibit hysterogenic zones; they suffer from rhachialgia and super orbital neuralgias.

The author has not looked for this symptom except in patients affected with traumatic neuroses; there is no proof that it may not exist in those affected with other nervous disorders.

INHIBITORY ACTION OF THE CEREBRAL CORTEX.—Sherrington, working in the physiological laboratory of St. Thomas' Hospital, London, found that if divergent strabismus of one eye is produced by section of the third and fourth nerves, stimulation of the appropriate area of the cortex of the same side will cause, along with external deviation of the opposite eye, relaxation of the external rectus of the operated eye, causing it to move to the median line. Corresponding, but inverse results may be obtained by section of the fourth and sixth nerves, leaving the third intact. This appears to show that stimulation of the portion of the cortex which produces contraction of a group of muscles exercises an inhibitory effect on the nerves supplying its antagonists.—*Revue Neurologique*, June 31, 1893.

CRANIECTOMY.—The following are the conclusions of an elaborate paper by Bourneville, *Progrès Méd.*, June 24, 1893.

I. The surgical treatment of idiocy is based on an hypothesis not supported by pathological anatomy.

II. Premature synostosis of the sutures of the cranium does not exist in the different forms of idiocy. Only exceptionally is a partial synostosis encountered.

III. The lesions causing idiocy are usually profound, extended and various, and are therefore not susceptible of modification by craniectomy.

IV. The diagnosis of synostosis of the sutures and of thickening of the skull, is beyond our present methods of investigations.

V. According to most surgeons the results obtained from surgical intervention, are slight, dubious, or *nil.* Serious accidents (paralysis, convulsions, etc.) and death may follow.

VI. The medico-pedagogic treatment based on the method devised by Seguin and perfected by the introduction of new procedures, judiciously applied for sufficient time, permits us to obtain almost always a marked improvement, and often suffices to put idiot and defective children into a condition to live in society.

SIMULATION IN THE INSANE:—Dr. Larrousinie, *Thése de Paris*, 1893, (abstr. in *Jour. de Méd. de Paris*, No. 26), shows very justly how it is for the interest of society as well as for that of the patients, that the alienist physician should recognize that simulation is very common among the insane, and that it may lead to serious results if not detected. He shows that this fact, though known back to Pinel, has only of late years attracted much attention, and he regrets that friends, magistrates frequently, journalists invariably, and sometimes even physicians who are not specialists, should be the dupes of the insane, by which fact much of the outcries against asylums and the disastrous disagreements and divisions that are often seen, are caused.

Dr. Lafrousinie studies successively the simulation in the non-dangerous and the dangerous lunatics, and gives a special chapter to the pyromaniacs, in whom it is the rule. It may be met with in all forms of derangements, but the impulsive forms, excepting pyromania, are most free from it. It is especially common in systematized delusional insanity, a fact of importance, as this is one of the most dangerous forms. It may present itself as partial or total and in an infinite number of degrees. In general, self-interest is the motive; one tries to deceive to facilitate his escape, another has the notion of revenge. Sometimes shame is the cause, as frequently happens in females with sexual hallucinations. It is of importance, therefore, for the physician to see through the deception, he should be easily suspicious of it, and should study his patients with the greatest care in view of the possibility of simulation. The author ends his thesis with the recommendation that a medical expert should sit with the judge in cases where the question of the retaining or discharge of a patient in an asylum is involved. In case of a disagreement a second expert should be called in to decide the case.

VERBAL BLINDNESS.—At the session of the Société de Biologie, July 29, (reported in *Le Progrès Médical*, No. 31), M. Dejerine stated that, in connection with M. Viallet, he had investigated the anatomical localization of pure verbal blindness, and that they had found in a case of verbal blindness with integrity of speech and of writing, either spontaneous or from dictation, a degeneration of the lower portion of the inferior longitudinal bundle, i. e., of an association bundle arising in the apex and the convolutions of the internal and lower faces of the occipital lobe and terminating in great part in the temporal lobe, thus uniting the cortical visual centre with those of language.

THE INTRA-CEREBRAL OPTIC CONDUCTING TRACTS.—At the same session, M. Viallet described a new bundle forming part of the intra-cerebral tract of the optic conductors. This bundle starts from the lower lip of the calcarine fissure and the convolution of the lingual lobe, and distributes its fibres in the occipital convolutions of the convexity of the brain. He proposes for it the designation of transverse bundle of the lingual lobe.

HYSTERICAL MUTISM WITH AGRAPHIA AND SYSTEMATIZED FACIAL PARALYSIS.—MM. Ballet and Sollier, *Rev. de Méd.*, No. 6, June, 1893, (Abstract

in *Rev. Gen. de Méd. de Chirurg.*, &c)., report a case of hysterical mutism in which agraphia, the lack of which, as a rule, in such cases, had been insisted upon by M. Charcot, was present, together with some other interesting peculiarities. They conclude with the following:

1. Agraphia may present itself in a very clear and persistent manner in the course of hysterical mutism. It does not seem to depend, as in case of organic lesions, upon the loss of graphic or visual verbal images, but simply upon the defect of psychic synthesis of these images required by handwriting.

2. Not only is facial paralysis of hysterical origin undeniable, but this paralysis may be systematized for certain movements such as those required for articulation and speech.

DYNAMOMETRY IN THE INSANE.—Dr. Ed. Toulouse, *Bull. de la Soc. de Méd. Mentale de Belgique*, June, 1893, reports the results of investigations made by himself on 263 insane females to test their power of voluntary muscular contraction. He found a constant diminution of this power, as compared with some women, other things being equal, this decrease being greatest in the lowest grades of dementia and imbecility or idiocy, and lessening as we rise through maniacs and melancholiacs to persecutory insane, epileptics and lucid patients. His table of dynamometric tests, showing the average in each form, is as follows:

	Right hand.	Left hand.
Dements (36)	11.3	10.3
Imbeciles and idiots (43)	13.5	13.1
General paralytics (30)	17.4	15.3
Maniacs (26)	17.7	15.9
Melancholiacs (39)	18.1	16.9
"*Persecutées*" (32)	20.2	20.
Epileptics (26)	22.7	22.
"Lucid patients" (31)	25.2	24.2

The average of thirty-seven normal adult females was R. 33, L. 28.

A certain amount of this difference may be credited to physical causes, but it is difficult to accurately estimate this element. In discussing the causes, taking into account all the psychic and other conditions, the author concludes that the principal and constant cause of the enfeeblement of the voluntary muscular contraction is weakness of the attention, which is met with in all psychopathic states, and in following an order indicating the increasing progression of the psychic disorder, in the conditions of congenital or acquired weakness of the brain (dementia, idiocy, imbecility, general paralysis), in the vesanias with unsystematized delusions, (mania, melancholia), and in those with more systematized delusions (delusions of persecution), finally in the states where the lucidity of the patients, is usually marked (epilepsy, mental degeneracies, moral insanity, etc.) The mental diseases thus form three rather natural great groups classed according to the intensity of the lucidity and the attention which vary with each other as a rule.

After this general cause there may be others, such as the variations of the mental condition, psychological automatism, etc., but these are secondary to the above.

ACROMEGALY.—Claus and Van der Stricht, *Ann. de la Soc. de Méd. de Gand.*, 1893, (abstract in *Bull. de la Soc. de Méd. Mentale de Belgique*, June, 1893), offer the following as the result of the examinations of the different organs in a case of acromegaly:

(1). The lymphatic ganglia (of the neck) have undergone profound changes. Their structure has become uniform; they contain no more lymphoid follicles. We find in them all particles of white globules, with one nucleus, polymorphic nuclei and multiple nuclei, even megacaryocytes and policaryocytes. Many of the elements are undergoing chronatolysis.

(2). The striped muscular tissue of the nucha presents characters of atrophy and sclerosis. At the same time the nuclei bud abundantly and the sarcoplasma undergoes a vacuolar and fatty granular degeneration.

(3). The hypertrophied pituitary gland is undergoing a process of necrosis ending in liquefaction of its constituent parts. The parts that have escaped this destruction are formed of a lymphoid tissue analogous to that of the lymphatic glands of the neck, we also find there many megacaryocytes and policaryocytes.

(4). The thyroid gland is affected at once with glandular atrophy and hypertrophy, also a hypertrophy of the conjunctive framework accompanied with lymphoid infiltration.

(5). The liver showed fatty degeneration and atrophy of the glandular elements, a slight lymphoid infiltration of the interlobular connective tissue also existed.

(6). The kidney is affected with chronic parenchymatous and interstitial inflammation.

(7). There existed a hyperplasia of the splenic pulp and of the malpighian follicles of the spleen. The increase in volume of the tongue is due to hyperplasia of the connective tissue framework.

(8). Megacaryocites exist normally in the closed follicles of the base of the tongue in the bat.

(9). The glandular tubes of the hypophysis of an aged man are covered with principal cells and chromophile cells. Both are rich in fatty granulations. Intermediate stages exist between the two forms, hence it is probable that one variety engenders the other.

(10). The glandular elements of the normal thyroid gland of aged persons are very rich in fatty granulations.

HYDROTHERAPY IN STATES OF MENTAL EXCITEMENT.—Fürstner, *Cbl. f. Nervenh. u. Psych.*, 1893, (abstract in *Bull. de la Soc. de Méd. Mentale de Belg.*) offers the following conclusions:

1. It is incontestable that certain hydrotherapeutic procedures, directed by the physician himself, give advantageous results in many of the insane.

2. This treatment cannot be instituted without a previous careful physical examination.

3. Under the action of this method we often observe peculiarities relative to the individual reaction; these should be taken into consideration.

4. Tepid water is utilized exclusively under the form of general baths, Cold water may be employed in the form of frictions, packs, douches, or partial and general baths.

5. The general tepid bath of from 79° to 86° F. is most usually recommended for from 10 to 20 minutes to one hour. Baths of a higher temperature and longer duration are prescribed only exceptionally. The results obtained do not correspond to the expense of fittings, especially in private dwellings.

6. The action of the general warm bath is threefold: it calms, it favors sleep, it quickens the circulation. More than this, it contributes to the hygiene of the skin, which, especially in untidy and agitated cases, and patients suffering from organic disease, should be treated with especial care.

7. The general tepid bath is indicated in all acute and functional psychoses. The depressive forms, especially when the patients have suffered physically, react very advantageously. Also in the psychoses due to an organic affection, especially in general paralysis, it does good service. In case of congestive states appearing, they may be obviated by the simultaneous application of cold to the head.

8. In patients who actively and persistently resist them, it is advisable to forego the baths; also in certain exceptional cases, difficult to foresee, where the bath is followed by an aggravation of the symptoms, such as distress or excitement.

9. The use of cold water has generally an unfavorable effect in the depressive forms of mental alienation, especially during their acute stage and in all nourished patients. The systematic treatment with cold water (Kneipp system), practiced to-day without regard to the bodily condition, is generally unfavorable as regards the duration of the malady, in most cases.

The results of this treatment are the more serious from its being prescribed by preference in the very important initial stage of the disorders, and moreover it is very often accompanied with a therapeutic error; the diminution of the nutrition.

10. The treatment of general paralytics by cold water requires special precautions. Ablutions and douches, particularly when involving the head, act in an unfavorable manner; they especially increase the excitement and seem even to favor the outbreak of attacks.

11. Treatment of excited states, for example, of mania in young and vigorous individuals, post-epileptic psychoses, and principally those forms accompanied with an elevation of temperature, by the moist general packing gives very favorable results.

12. Frictions and ablutions, the head excepted, are prescribed in the later stages of the functional psychoses, especially when the progress of the disease is slow. They are especially indicated to combat the numerous conditions of debility of the central nervous system, to favor the resistance of the patients or those predisposed to the diseases, and also in conditions of neurasthenia, hypochondria, and convalthescence. We can also utilize them as a prophylactic in the hereditarily disposed.

13. Cold water also is of value in the form of partial envelopments, to combat certain feelings, as for example the envelopment of the chest for the circumscribed sensations of precordial pain. Other uncomfortable sensations, such as that of compression of the head, may be relieved by partial cold baths, e. g. foot baths.

14. In certain untidy patients, ablutions and douches may cause amelioration. The selection of these patients should be made exclusively by the physician. Treatment of onanism may also be attempted with cold water.

15. Cold baths, river bathing and sea bathing are prescribed when we wish to fortify the central nervous system. The reaction of nervous individuals, especially to sea bathing, is very variable and hard to estimate. At the beginning only baths of very short duration should be advised in any case.

AUTO-INTOXICATION IN INSANITY.—At the La Rochelle meeting of the French Congress of Mental Medicine, August 1st, a report was made by MM. Régis and Chevalier Lavaure on the subject of auto-intoxications and their relations to mental medicine, the substance of which is thus given by the *Progrès Médical*, No. 31:

The authors first recalled the three great causes of intoxication that may result from disorders in the nutrition of the organism: (1) abnormal productions of toxic matters; (2) incomplete transformation of those introduced into the organism; (3) insufficient elimination of normal and abnormal poisons, whence auto-intoxication.

They next reviewed briefly the history of investigations on this question, from the ancient humoral theories down to the studies of Selmi and Gautier, of Bouchard and his school in France.

The toxic principles need to be determined and recognized chemically and experimentally in the normal system as well as in disease; products of cell life of our tissues or of parasitic microbean cells, these alkaloids (leucomaines or ptomaines) are chiefly eliminated through the kidneys, therefore they have been mainly studied in the urine and its extractive products.

It is by means of intravenous injection that the great rules of experimentation have been determined, account being taken of the time passed during the injection and of the body weight of the animal experimented upon, in comparison with the quantity injected. But the toxicity of the urine is in inverse proportion to that of the serum and the other products of the physiological secretions and excretions.

The elements of the poisoning of the organism are therefore multiple; besides the toxalbumins, proteines, diastases, etc. We must take account also of the mineral substances, potash, soda, acids.

As Bouchard says, man is the receptacle and laboratory of poisons. Applying these facts to psychiatry and neuropathology, the authors state the following conclusions:

(1). The toxicity of the urine is notably diminished in maniacal and augmented, on the contrary, in melancholic conditions. Further, the urine of maniacs and that of melancholiacs have different action on the animals in whom they are injected; the former causing chiefly excitation and convulsi-

bility, and the latter, depression, inquietude and stupor: a positive proof that auto-intoxication is the cause and not the effect of the mental state. As has been often verified in certain auto-toxic maladies, eclampsia, for instance, we often find in insanity an inverse toxicity of the urine and the blood, in mania especially, is sometimes as much more hypertoxic as the urine is hypotoxic.

(2). These results which, incomplete as they are, show by their almost perfect concordance that the phenomena of auto-intoxication play an important part in mental diseases, are confirmed by recent nosological investigations on the insanities of the acute inflectious diseases, and those of the visceral and diathetic disorders.

As far as the psychoses of the infectious diseases are concerned, they are the result either of the direct action of the microbes or of their mediate and indirect action through the toxines they secrete; in a clinical point of view, they may present themselves at two different periods and consequently under two different aspects. During the febrile stage they ordinarily take the form of an acute delirium. During the post-febrile stage or during convalescence, we have a so-called asthenic psychosis, a more or less variable mental condition, consisting usually of a mental confusion, stupidity, clouding of the faculties, a pseudo-dementia; possibly it will be proper to admit the existence of a third form intermediate between the two preceding.

The visceral psychoses are also undoubtedly due in large measure to auto-intoxication. They are even, to speak truly, genuine insanities from auto-intoxication.

We may say that in cases where the intoxication is acute, it habitually shows itself as an acute toxic delirium, resembling alcoholic delirium (this is the case with uræmic insanity); when the intoxication is slow and chronic, ordinarily induces a melancholic condition; lastly we may see cases recalling more or less paretic dementia.

The diathetic psychoses, although included in the insanities from auto-intoxication or infection, have not been the subject of extensive studies; during the acute episodes these attacks also take on the type of acute toxic delirium; these attacks seem to correspond to variation of composition of the organic liquids (uric discharges preceding the end of the attack, and urinary hypotoxicity).

General or local anti-infectious, antiseptic treatment, and this is a powerful argument in favor of the toxic origin of these disorders, gives here often excellent results. Although it is not possible to formulate a definite therapeutics, there are, nevertheless, enough facts to show that in the infectious or auto-toxic insanities, we must resort to the treatment of the infection or the auto-intoxication to relieve the mental disorders.

In the discussion that followed, M. Gilbert Ballet, for himself and MM. Bordas and Roubinovitch, thought that the subject was too extensive and that it might be well to narrow the points of discussion. Urinary examinations seem to have given interesting results, but he insisted on the point that they were not always comparable among themselves, the methods of different experiments were so varying. To be assured that the facts were really due to the toxicity of the urine we must be also sure that all the conditions were equal, which is not always easy. He quoted some experi-

ments he had made in which he had killed rabbits with injections of distilled and ordinary water in quantities even less than is required of toxic urine. Other results were somewhat embarrassing, for instance, the continuance of the urinary toxicity, and even its increase in one of his patients after recovery from mental disease. MM. Ballet and Roubinovitch found that hypertoxicity of the urine nearly always coincided with a marked saburral condition of the digestive tract and asked if we might not see the cause of the phenomenon in abnormal intestinal fermentations.

The chemical analysis of the urine, M. Ballet thought, is of interest as much as its toxicity. He had, therefore, with M. Bordas made some investigations in this regard, giving especial attention to the ptomaines. They examined the urine of five healthy individuals, finding no trace of ptomaines, and of ten insane in four of whom there were none, while in the six others ptomaines were present in notable quantity. In two cases only, however, were the ptomaines toxic, while in these cases the urine was markedly hypotoxic. On the other hand, in one case the urine was markedly hypertoxic while no ptomaines were present.

M. Ballet, in reporting these facts, made no pretense of offering any conclusions. He considered that the question of auto-intoxications in mental disease was yet in its infancy, and that any attempt at synthesis was yet premature.

M. J. Voisin reported experiments and methods in regard to testing the toxicity of the urine of epileptics in which he found hypotoxicity during the attacks and continuously in some cases of permanent mental trouble. A marked gastric disorder coincided with the hypotoxicity.

M. Séglas reported observations of fourteen cases of mental derangement in which there seemed to be a direct connection between an auto-intoxication and the disorder. In all these the clinical type was that of primary simple or hallucinatory mental confusion, passing to simple mental torpor or to complete stupor. Simultaneously there were somatic disturbances of various kinds.

In two of the fourteen cases, experimental and chemical investigations were carried out. The former had for their end the determination of the urinary toxicity. After noticing the difficulties of the methods, M. Séglas reported that in one of his cases he found a urotoxic coefficient above the normal on two days, but afterwards falling below. On the first of the two days the patient had been purged, and on the second he had had six leeches applied. In the other case the urotoxic coefficient was constantly below normal, the toxicity of the serum remaining normal.

The result of the chemical examination was negative in the first case, but in the second there was a slight diminution of urea, chlorides and phosphoric acid. A second series of analysis, showed a greater decrease of urea with increase of chlorides, and presence of urobiline.

A toxic product was isolated in this case that caused instantaneous death of a frog and that of a white mouse after expiration of five hours; its chemical constitution could not be determined.

The best therapeutic results in these cases were obtained by favoring nutrition. Purging, leeching, diuretics, &c., seemed useful, possibly by assist-

ing in the elimination of the poisons. Gastro-intestinal antisepsis was also beneficial.

M. Séglas concluded that in all the observations if the nature of the occasional causes, the identical symptomatology, and the action of certain therapeutic agencies seemed to plead in favor of the auto-intoxication hypothesis, its absolute demonstration could not be said to have been made. Chemical and experimental results are as yet uncertain and incomplete. The question is only opened upon and is yet very far from settlement.

The subject was further discussed by MM. Charpentier, Legrain and others in favor of the theory of auto-intoxication. H. M. B.

A New Method of Treating Epilepsy.—Paul Flechsig adopts the following mode of treatment, which he considers more efficacious than any hitherto employed. In the first place, small doses of opium (powder or extract) are administered, and these are gradually increased in strength. The opium treatment is continued for about six weeks, and then suddenly stopped, being replaced by bromide in large doses. At the end of two months the dose of bromide is gradually diminished, and small doses are then taken regularly. The essential point of treatment appears to be the sudden withdrawal of opium and its replacement by bromide. The former drug appears to prepare the way for the latter, to render the bromide effect more intense. Fits are usually noticed to disappear shortly after commencement of the bromide treatment. Flechsig at the conclusion of this (preliminary) paper reports a severe case of epilepsy in which this treatment was employed with striking success.—*Neurologisches Centralblatt*, April 1, 1893.

Influence of the Suspension-Treatment upon Visual Disorders in Affections of the Spinal Cord.—V. Bechterew has made much use of suspension in nervous disorders, and has, like others, observed improvement in the general condition of patients so treated. In the present communication he restricts himself to recording the improvement which occurred in vision in three cases of spinal disorder, two of them tabetic. The results obtained show beyond doubt that suspension brings about improvement even in cases in which the visual disorder is dependent upon organic changes in the optic discs—such as advanced congestion and even atrophy. Visual acuteness is increased and the field of vision enlarged. Improvement lasted three months in one case. In explanation V. Bechterew adopts the theory that suspension produces increased blood pressure and active hyperæmia in the brain. [The same holds good for the spinal cord]. In view of our almost complete inability to improve by medicinal treatment visual defects dependent upon organic disturbances he considers that the suspension-method is worthy of trial in cases analogous to those now noted. V. Bechterew strongly recommends the suspension apparatus of Dr. Sprimor, as being at once effectual and safe—*Ibid.*

Histology of the Nervous System in Paralysis Agitans and Senility.—Ketscher (abstract from *Zeitschr. f. Heilkunde, Bd. XIII, H. 6, '92*), has examined the central peripheral nervous system in three cases

of paralysis agitans. In all there were morbid changes—the specific elements showed atrophy of varying degree: the cerebral ganglion-cells were strongly pigmented, rounded, here and there in a state of granular degeneration; the spiral nerve fibres, especially those in the posterior columns, were degenerate and atrophied and had completely disappeared here and there, so that holes were present; the same applied to the fibres of the peripheral nerves. The interstitial tissue in cord and peripheral nerves was much increased. Vessels much altered, walls thickened, miliary aneurisms and hæmorrhages here and there, adventitial sheaths bulging in places, and the spaces filled with round-cells and lymph. These changes are similar to those described by other authors. Conjecturing that they might be due merely to senility, Ketscher examined the nervous system of ten old persons, free from paralysis agitans. He found changes which did not differ qualitatively at all from those present in the cases of paralysis agitans, though they were less marked. Ketscher is, therefore, of opinion that this affection is merely the expression of unusually pronounced and possibly premature senility. He believes that the blood-vessels are primarily the nerve-elements secondarily involved.—*Ibid.*, March 1, 1893. E. G.

Mechanical Effects of Cerebral Tumor.—In the *Jahrbuch für Psychiatrie* Dr. Sommer has described a case with reference to the effects produced upon the brain by a large tumor and to the result of its removal. The paper is summarized in a recent number of the *Neurologisches Centralblatt*. The patient was a man aged forty-two, who had suffered from headaches for nine months. Six months before admission to hospital he had transient weakness of the right arm, and when he came under observation he complained of headache and a sense of pressure in the left parietal region. He suffered from slight weakness of the lower part of the face on the right side, difficulty of speech, and inability to write to dictation or spontaneously, although he could copy. There was optic neuritis. The diagnosis of tumor on the convexity of the left parietal region was made and an operation was recommended. A tumor growing from the dura mater was found and was removed. The right-sided weakness and inability to speak persisted after the operation. The patient died three days later. At the necropsy it was found that the left hemisphere was pressed to the right and flattened, and the sulci in the locality of the tumor were much altered. Death, Dr. Sommer thinks, was due to the sudden removal of a slowly developed, compressing mass, and he suggests that in similar cases it would be well to remove the tumor gradually and in pieces, so as to minimize the risk which seems to attend such a procedure as was followed in this case.—*The Lancet*, September 9, 1893. J. M. M.

BOOK REVIEWS.

Mineral Springs and Health Resorts of California, with a Complete Chemical Analysis of Every Important Mineral Water in the World. By WINSLOW ANDERSON, M. D., M. R. C. P. London, M. R. C. S. England. Joint Editor of the Pacific Journal, San Francisco: The Bancroft Company.

This work is a glaring example of book-making. From internal evidence alone it is easy to trace the process of its construction. In 1889 Dr. Winslow Anderson competed for and obtained an Annual Prize given for an Essay by the Medical Society of the State of California. As a teacher of chemistry in the State University, and as a practical analyst, Dr. Anderson has naturally taken an interest in the Mineral Springs of the State in which he resides. Some years ago he obtained analyses "of every American and European spring of any importance," and since that time has tasted the waters of many Californian Springs and compared them with those of the older resorts. In this way Dr. Anderson accumulated a large number of analyses of Californian Mineral Springs. Had Dr. Anderson been content to publish these analyses, along with those of the European and American springs outside California, as an appendix to or in conjunction with his prize essay on the Mineral Springs of California, he would have given to the profession a useful and valuable book of reference. But when Dr. Anderson was tempted to enlarge the bulk of his intended volume by adding a lot of extraneous matter, such as an "Historical Sketch of the discovery of California;" an "Account of the early Mission Fathers," etc., etc., he succeeded in making a book part of which is only fully intelligible to the medical profession or to Analytical Chemists, and the remainder to the general public. As a handbook for the profession, therefore, the work contains a lot of padding which could well be dispensed with, while as a guide-book to the laity it is incomplete and inaccurate. Perhaps the worst feature in the manufacture of this work is the introduction of, in a higgledy-piggledy fashion, a series of antiquated and inartistic illustrations many of which are neither more nor less than a disgrace to a publishing house of the standing of the Bancroft Company.

Dr. Anderson is scrupulously careful in acknowledging his obligations to numerous professional authors, including "Homer, Pliny and Tacitus," as well as "many daily, weekly, and monthly journals." Some of his authorities have, it is to be feared, like the illustrations to the volume, become a little out of date.

Although the general get up of the volume cannot be commended, Dr. Anderson's Prize Essay on the Mineral Springs of California, with its chapters on the "Medicinal Use of Mineral Waters;" "Therapeutics and Mineral Waters," "Rules for Bathing," &c., &c., is certainly well worth perusal. It is difficult, however, to recognize in his description of the methods in vogue in "the Oriental bathing establishments to be found in Europe and other large

cities" the so-called Turkish or Russian baths of to-day. Certainly the methods of bathing described do not tally with the practice in baths of this class in London and Paris.

If the author had not claimed this his work contained "a complete chemical analysis of every important mineral water in the world," it would have sufficed to say that he had been a diligent and successful collector of analyses of this class. But the claim itself is a challenge to comparison and verification, and when his index to springs is put to a very superficial test it is not difficult to find many omissions. For example, no mention is made of the very hot Algerian Baths, Hammam-Meskoutin, Biskra, and Hammam-R'Izha, or to the natural hot vapor baths in the cave Monsummano in Upper Italy, or to the baths and mineral waters at Buxton and Leamington in England. These are but a few of the omissions.

Dr. Anderson has evidently been a visitor and an intelligent observer at some of the Mineral Springs and delightful health resorts easily accessible from San Francisco, but he is evidently not familiar with all the health resorts in Northern California. Shasta Soda Springs and the delightful resorts on the Siskiyon Mountains are dismissed in less than three lines. Of Southern California he evidently knows but little, and, apart from the Mineral Springs it contains, it is hardly recognized as a health resort. Much of the information respecting the Springs themselves is hopelessly out of date. The Springs at Elsinon in San Diego County are referred to as undeveloped, although a small town, a bath house, and an hotel have existed there for years. Dr. Anderson also suggests that a large resort ought to be built at the Arrowhead Hot Springs which he says are of undoubted value. At these Springs there have been baths and a large hotel for some years, while so far from Colton being the nearest point of approach, the place can be reached from Arrowhead Station on the Southern California Railway.

It is to be hoped that the author will not send any of his friends in search of the San Bernardino Hot Springs with the information that "they are located in the San Bernardino Mountains and County." Seeing that the mountains are numerous and lofty and that the County, prior to its recent surrender of a small section to Riverside County, contained an area of 23000 miles, the search might be long and painful.

There may be some confusion as to the identity of San Bernardino and Arrowhead Hot Springs, but Dr. Anderson has only made the confusion more confounded. It is evident, however, that these Springs *are* identical. In 1876 in Appendix JJ. of the Annual Report of the Geographical Survey the San Bernardino Hot Springs are described as being seven miles North of San Bernardino and are said to be "easily recognized by a barren spot on the hillside bearing resemblance to an ace of spades." This "ace of spades" is undoubtedly what is to-day recognized as an arrowhead and fixes the identity of the Springs.

But enough has been said to indicate to Dr. Anderson that his next edition will need considerable revision. J. G. B.

Mental Symptoms of Fatigue. By EDWARD COWLES, M. D. Reprinted from The Transactions of the New York State Medical Association, 1893.

In this paper Dr. Cowles presents a synopsis of that portion of his larger work on the Mechanism of Insanity, in which is discussed the transition from health to disease through the initial stage of fatigue. Diminution in the discharge of nerve force, or excessive stimulation and discharge,—"relative weakness of inhibitory control,"—results in failure of the mental elements to "functionate with normal co-ordination," and the exhaustion thus induced is intensified by accumulation of the toxic products of waste. The effect upon the nervous system is "increased excitability from weakened resistance and inhibition, with a quick exhaustion under exercise." The earliest mental symptom is defective control of "voluntary attention," followed soon by "alteration of the bodily feelings," which creates a "sense of ill-being" and variations in the "emotional tone." Coincidently, and as part of the general "mental inadequacy," are defective memory, a "sense of effort," and "difficulty in keeping awake." So far the symptoms are those of normal tire, amenable to the relief afforded by usual processes of recuperation. In the downward path the approach to a morbid state is indicated by the grafting upon these symtoms of "introspection, retrospection and apprehension (worry and hypochondria)," the symptom group being completed by "changed organic sensations, physical and mental irritability, and restlessness, diminished sensitiveness, dulness and languor," the whole thus picturing fully developed neurasthenia—the threshold of insanity. Simultaneously occurs the most useful, for purposes of diagnosis, and, at the same time, most ominous symptom of all, "fatigue anæsthesia"—"tire of the power to feel the tire."

Readers of this abridged paper will be attracted to Dr. Cowles' larger work on Neurasthenia. The light shed by his investigations in the neglected field lying midway between the practising and the hospital physician, increases the diagnostic ability of the one and the therapeutic resources of the other. The prompt recognition of incipient insanity and the requirements for treatment thus created extend the legitimate domain of hospital work and open the way for better results. That individual patients have already been benefited is within the experience of the reviewer. J. M. M.

Jahresbericht der niederoesterreichischen Landesirrenanstalten, Wien, Ybbs, Klosterneuburg und Kierling-Gugging, der niederoesterreichischen Landes-Irrenzweiganstalt in Langenlois, sowie der sonstigen Anstalten zur Unterbringung Geistesgestoerter Niederoesterreichischer Landespfleglinge pro 1891–92. Ausgegeben vom niederoesterreichischen Landesausschuss. [Annual Report of Nether-Austrian Institutions for the Insane for 1891-2.]

This report shows that 2,750 patients were treated in the institutions enumerated above, of whom 1,749 were admitted during the year; 216 were discharged as recovered, and 287 died. The number remaining under treatment at the close of the year was 2,074.

The large proportion of cases of alcoholism, noted in previous reports, continues. Out of 611 men admitted to the Vienna institution during the

year, alcoholism was held to be the exclusive cause of insanity in 146, and a contributing cause in 70, a total of 35 per cent.

Perhaps the most noteworthy thing mentioned in the report was the institution of the branch hospital at Langenlois. Trachoma was so prevalent in the asylums as to call for a special hospital for the insane suffering from infectious diseases of the eyes. A building, originally used as a monastery, was appropriated for this purpose, and received 181 patients transferred from the different institutions.

The Vienna report gives some space to the trials made during the year of the hypnotic effects of duboisin sulphate. It was found to be a pretty reliable hypnotic, giving the best results in cases in which sleeplessness was due to hallucinations, and the poorest in melancholia. When administered hypodermically, sleep was preceded by a stage of excitement, somewhat similar to alcoholic intoxication, with muscular weakness. This condition was not usually observed when the drug was administered by the mouth. Nausea, giddiness, intermittence of the pulse and superficial respiration were observed in some cases. The drug seemed to exercise no permanent effect on the course of disease.

Die Trinkerasyle Englands und die projectirte Trinkeranstalt fuer Niederoesterreich vom Standpunkte der Administration. Von FEDOR GERENYI, Inspector beim niederoesterreichischen Landesausschuss. [English Inebriate Asylums, and the proposed Inebriate Asylum of Nether-Austria. By FEDOR GERENYI.]

The overcrowding of the Austrian asylums for the insane by alcoholic cases, and their objectionable characteristics as inmates of such institutions, led the Nether-Austrian Provincial Committee (Landesausschuss), in 1891, to propose the erection of a public inebriate asylum. The supreme Sanitary Council having reported unfavorably upon this proposition—on what grounds is not stated—it was resolved to establish a special institution to which cases of alcoholic insanity who had recovered their mental clearness, but had not regained sufficient self-control to warrant their liberation, could be transferred from the hospitals for the insane. The author was sent on a tour of inspection to the English inebriate asylums, to collect information with regard to construction and management, of which this pamphlet is one of the results. He found the results attained encouraging, on the whole, but that the institutions were hampered by the unnecessarily complicated preliminaries to admission, and by the provisions of the law allowing only the admission of voluntary patients, and placing the maximum period of detention at one year. From an abstract of the laws of the various British provinces, it appears that most of them authorize the compulsory commitment of inebriates, but limit the period of detention to one year.

With regard to the proposed institution, it is recommended that it be situated in a rural district, and provided with sufficient land to enable the patients to be employed in agriculture. It should be under medical direction, and the physicians and all employés should be required to abstain strictly from alcoholic drinks. The inmates should be held to compulsory labor as far as warranted by their state of health, and refusal should be met by

restrictions in diet or luxuries. An anticipated difficulty is the disposition of such patients to demand their release when they are no longer technically insane, and yet have not acquired sufficient power of resistance to their appetite for drink. In view of this, he proposes that the law should be so changed as to allow of the detention of such cases for a prescribed time.

W. L. W.

The Duty of the State to the Insane.

Under the above title Dr. Andrew MacFarlane contributes to the *Popular Science Monthly* for October, a review of the present and prospective requirements of the insane. Popular opinion has been educated to the recognition of insanity as a disease, and not as demoniacal possession, and the public demands, as a result of medical care, the restoration to the community of of those whose insanity is curable, and the comfortable maintenance of those whose disease will last with life. In 1890 there were in the State of New York, 16,002 insane patients under legal commitment in thirty public and and private asylums, whose buildings and equipment had cost $16,291,600, where 2,000 people were employed, and which were maintained at an annual cost of $3,157,000. By the so-called "State Care Act of 1890," all insane patients are to be removed from county alms-houses to State hospitals, and the State has been divided into hospital districts, the hospital of each district to care for all the insane of the district, thus making mixed institutions caring for both classes—the acute insane, those offering the best chances of cure, and the chronic insane, who need to be maintained for life.

The "hospital idea" has been recognized by the statutory change, in many States, of the titles from "asylums," places of refuge, to "hospitals," places of care; and to carry out the practice and assimilate it with the theory, requires all the resources of medical knowledge, for, as Dr. Batty Tuke has written, the "subjects of most of the insanities are very sick people indeed, for in the first place they are in danger of their lives, and in a second, they are in imminent danger of lapsing into that living death, terminal dementia." "Each case, under circumstances of curative rest and calm, requires special hospital treatment conducted on identically the same principles as those that regulate practice in our general infirmaries, and conducted under similar conditions as regards rest, nursing, and therapeutic agents."

Under present conditions, for the sake of example, a Sate Hospital of 1,000 patients is considered. The staff would consist of a medical superintendent, five assistant physicians and a woman physician. In a hospital of that capacity there would never be more than one hundred patients who would be considered curable, and the number would probably not exceed sixty. More than nine hundred patients would be incurable, and these need kindly custodial care with incidental medical treatment. Two, or at most three physicians, could easily do all that a humanitarian spirit might deem necessary for such a number of this class of patients. Three or four physicians would thus be left to devote themselves to the curable patients. In the accommodation of this minority, three or four houses should be erected apart from the large, main structures, which provide suitably for the mass

of chronic cases. These houses would be built simply and comfortably, so constructed as to do away with the huge institution aspect, to present a home-like appearance, and so furnished as to take away as much as possible all indications of confinement and restraint. They should permit the utmost privacy, with the opportunity of intercourse if deemed beneficial. Here the real medical work of the hospital should be done and no labor should be spared which would in any way tend to the recovery of a patient or help to solve any of the unknown problems of insanity. Electricity, massage, baths of all kinds, thorough examination of the blood and the various excretions, the use of the sphygmograph and ophthalmoscope, together with a very rigid physical examination would easily and most profitably keep employed the number of physicians assigned to these patients. The nurses should be especially selected, and should be trained in the principles and practice of nursing; in addition to the training of the general hospital, they should understand the methods of caring for the nervous invalid, and the insane. One or more nurses should be assigned to the special service of one patient, if necessary.

It is estimated that the cost of maintaining each hospital annex would not exceed ten dollars per week per patient. The average weekly cost of both classes now is $3.50 per patient, or $3,500 for a State hospital of 1,000 patients. Under the separate plan of treatment, the curable patients, numbering not more than eighty, could be maintained at a weekly cost of ten dollars per patient or $800; the nine hundred and twenty chronic incurable patients could be humanely and kindly cared for at three dollars per week for each person, or $2,760, thus making the total cost of treatment, under probably the best conditions, $3,560.

This mode of treatment, far from being Utopian, is at present in successful operation in Strasburg and Heidelberg, and is about to be carried into effect in some of the Scotch asylums. The most eminent alienists in Great Britain and America have strongly advocated it.

In the last fifty years the evolution of the care of the insane has been rapid and progressive. The future presents a grand work to be accomplished—the elevation of this department of medicine to the highest scientific and philanthropic plane.

This may be accomplished by—

First. The separate treatment of the curable and incurable insane under the same medical executive.

Second. True hospital treatment for the curable insane with all the medical skill, nursing and care, regardless of expense, which the character of the disease demands.

Third. Simple, humane, custodial care of the incurable insane at a moderate expense.

NOTES AND COMMENT.

JEAN-MARTIN CHARCOT.—The death of Professor Jean-Martin Charcot, which occurred suddenly on August 16th last, from angina pectoris, removes one of the greatest names from the rolls of scientific medicine of the present century. For twenty years he has stood at the head of French clinical teachers and as founder and chief of the so-called school of the Salpêtrière, he has made his lasting record in the history of modern scientific medical progress.

Although for many years his name and works have been familiar to all well informed physicians, and few, indeed, more so to all those interested in mental and nervous pathology, his history and personality were far less widely known, and the following facts which we extract from the eloquent and appreciative notice by his illustrious pupil and friend, M. Bourneville, in the *Progrès Médical* of August 26, will be of interest to most of the readers of this JOURNAL.

J.-M. Charcot was born in Paris, November 29, 1825, and had, therefore, at his death, nearly completed his 68th year. He was the son of a respectable carriage builder of modest means, who was only able to afford a liberal education to one of his sons, the one who showed the best record in his primary education, the subsequent master in science. Young Charcot, after completing his secondary studies, chose the profession of medicine, and became *interne* at the Salpêtrière in 1848, passed his thesis of doctorate in 1853, and fulfilled the duties of chief of medical clinic from 1853 to 1855. During this period he was able, by giving special instruction, to repay in part to his father the expenses of his education. In 1856 he was nominated physician of the Central Bureau and four years later competed successfully in a *concours d' agrégation*. In 1862 he became the medical head of the Salpêtrière, a position he held all the remainder of his life. Here he instituted the courses of lectures and carried on the investigations that have made the Salpêtrière famous throughout the world, and which have been interrupted since their beginning only by the Franco-German war of 1870. Even his appointment of professor of pathological anatomy in the Paris Faculty of Medicine, with its added

duties, which he most honorably fulfilled for ten years from 1872 to 1882, caused no interruption of his labors at the Salpêtrière.

In 1882 a chair of clinical instruction in nervous diseases was founded for him at that hospital, thus giving official recognition to his work, though it had previously been tacitly recognized by aid from the public funds. In this chair he has carried on his lectures and studies since that date; studies, the interruption of which, by his sudden and unexpected death, is a loss to science and the world.

The other public honors of M. Charcot were his election to the Institute in 1883 and his nomination as commander in the Legion of Honor in 1892.

It would be impossible to enumerate here even the more notable of the contributions of Prof. Charcot; the list of titles alone, presented at his candidacy for membership in the French Institute in 1883, formed a volume of two hundred pages. He has not been less industrious since that time and the scientific world is well aware of the results of his labors. The Salpêtrière furnished unequaled clinical material which he utilized as few others could. The special types of disorders there met with, directed his attention more especially to the pathology of the nervous system which occupied him almost exclusively the last twenty years of his life, and his fame will rest on his contributions to this department. While there is hardly any subject in neurology of which he did not treat, we may mention as among those with which his name will be most associated and as having been especially elucidated by him, the various types of myelitis, the trophic disorders, and the nervous arthropathies in particular, and the manifold phases of hysteria and hystero-epilepsy. No enumeration that could be given here can furnish any adequate idea of his contributions to neurological medicine. His complete works, the publication of which has been undertaken by Bourneville, will comprise, when complete, not less than fifteen volumes, nine of which have already appeared.

Aside from his scientific pursuits, which, it would seem, were enough to monopolize all his time and attention, M. Charcot was an accomplished amateur artist and musician and a connoisseur of very high grade in these departments. He was, moreover, by the testimony of M. Bourneville a man of the most amiable and estimable character. He leaves a widow, one son and one daughter.

Our photogravure of the deceased is from a photograph in *Les Médecins Célèbres* series, lent by the generous courtesy of Dr. John S. Billings, of the War Department, Washington.

THE INCREASE OF INSANITY.—The article on the Increase of Insanity published in the present issue of the JOURNAL can hardly fail to interest everyone who pays the slightest heed to matters sociological. It has often been said that statistics can be made to seem to prove any proposition or its opposite, but it would be hard to so juggle the statistics marshalled by Mr. Corbet as to prove that insanity is not on the increase relatively as well as absolutely. The attempt has, indeed, been made by the Commissioners of Lunacy of Great Britain, who for some unaccountable reason seem to think they can put the startling evil in limbo by denying its existence; but with what ill success Mr. Corbet well shows in the present article. So uniform is the story that has come for years past from every civilized country that a person who abides by facts, be they pleasant or unpleasant, rather than by cheerful theories, has no choice but to believe that insanity is increasing at a rate quite out of proportion to the rate of increase of the general population. That fact challenges the attention of every lover of the race.

Why is it so? is a question that must come to the mind of every thoughtful person; and then, What can be done to stem the tide? Let us consider for a moment a few of the causes that may reasonably be supposed to have contributed to this alarming result.

Of course no alienist needs to be reminded at this late day that disease of the mind implies disease of the brain, functional or structural, it matters not which for our present purpose. The increase of insanity then implies the increase of disease of the brain. Stated in the most general terms, this increase must be due to the operation of one of two causes, or to both these causes acting together. Either the average brain of to-day has become a more unstable structure than the average brain of our ancestors; or else the average stress of environmental forces brought to bear upon the brains of our generation has become more severe than formerly. Perhaps both causes have been in operation. Let us see.

In the first place, we need not attempt to escape from the rather startling consideration that increasing instability of brains is exactly what might be expected *a priori*. The progress by evolution everywhere is, we are told, "from the homogeneous to the hetero-

geneous, from the stable to the unstable." Hence we cannot doubt that the average brain which is steadily evolving, is becoming a more and more unstable organ,—that is to say, a more sensitive and delicate, as well as a more efficient organ of thought. This consideration need not at all alarm us. The entire organism of the civilized man is more delicate, sensitive and unstable than that of the savage; just as the thoroughbred is more unstable than the wild horse, and the hot-house plant more unstable than its original stock. The balance is kept up by the fact that the environment of civilization becomes less and less severe in its operation as the organism upon which it acts becomes more and more unstable. So long as these two developments are complementary, normal conditions are maintained, and all is well. But the trouble is that the two never can go on *pari passu* for any great length of time, because human judgment, upon which the environment of civilization so largely depends, is so fallible a thing; hence the evolution of the race has always progressed spasmodically instead of evenly. The increase of insanity at the present moment is one of many signs showing that we are now in a period of maladjustment. The civilized brain is becoming unstable faster than the environment of civilization is relaxing its severity. Does the fault lie with the brain or with the environment?

Is it not with both? The average brain is becoming unstable too rapidly for many reasons. Mr. Corbet speaks of two or three. He believes that more and more individuals who have been insane are enabled to have offspring, because of improved hospital methods which effect more cures. This unique and interesting idea suggests again that there are no unmixed blessings in this strange world of ours. No remedy for this evil would seem to be at hand, but we cannot think that as regards the general result it is more than a drop in the bucket, so it need not greatly concern us in this connection. Of greater moment, in our view, is another cause mentioned by Mr. Corbet, namely, the evil of alcoholic intemperance. We are not at all sure that the use of alcohol is more general now than it was, say, a century ago, but we *are* well assured that the average brain of to-day is far more affected by this drug than was the average brain in the days of our great-grandparents. Acting on an unstable brain, alcohol produces effects quite out of proportion to its effects on a stable brain; and in our advanced epoch it is having, beyond all question,

a stupendous influence in lowering the general average of cerebral stability. At the risk of seeming to exaggerate the importance of what many may think a minor cause, we venture the opinion that marriages of expediency are doing as much as almost any other single cause to bring about the same result. It can hardly be questioned that such marriages are becoming more common under the artificial conditions of life, especially in the centres of population, and the thwarting of Nature's plan for uniting compatible temperaments must surely be responsible for a share of the neuroses, of which insanity is one, that are increasing with each generation. Somewhat in the same line, as a negative element, we would instance the tendency of the persons best fitted to propagate their species to have few children or none at all, leaving this paramount responsibility for the classes of the population least fitted for the task. But the entire subject is far too large for adequate treatment here, and with these suggestions as to a few of the more prominent causes that are tending to disturb the balance between organism and environment by weakening the organism, we must turn to the other side, and ask what share environment has in the same work.

The answer can scarcely be doubtful. Civilization has in many ways tempered the severity of environmental stress. We of to-day are perhaps better housed, better clothed and better fed than any previous generation. All that is good. But offsetting this stands the fact that the stress imposed upon the brain by modern conditions is more severe than it has ever been before. The struggle for mental supremacy is harder and harder. With the advance in general culture, there is less and less room in the upper ranks of mediocrity, more and more crowding even at the very top. Meanwhile the aspiration to be near the top has seized upon everyone. Not only do the classes elbow one another harder than ever before, but the masses are no longer content to remain the masses. The success of democracies has shown that if a man be not "born great" he may, in the words that so inspired Malvolio, "achieve greatness;" but they have given little reason to anyone to hope that greatness will be "thrust upon him." Rather the lesson has been that every man, be his natal station what it may, must struggle unremittingly in order to succeed. But the prizes are in view of all and none is debarred from striving for them; so an era of unrest, of vaulting ambition, has come upon our race. No man is

satisfied. If a man's income is $5,000 he yearns to emulate his neighbor whose income is twice or thrice that. Perhaps this was always so, but the limit is going higher and higher, and the average striven for is rising out of all proportion to the increase of the wealth of the world. So "success" means an exaggerated, disproportionate success, involving the failure of more and more competitors. The perpetual struggle thus involved in the attempt to reach an abnormal average of success imposes an environmental stress which is disproportionate to our present stage of evolution, and this is, in our opinion, the most potent factor in producing that disturbed equilibrium which manifests itself, among other ways, in an alarming increase of insanity.

Such in barest epitome is our conception of the general causes that are operating to undermine the brains and minds of the most advanced races of Christendom. Causes suggest remedies; but the details of these can only be worked out by practical humanitarians slowly and tentatively. But on one cheering belief we may rest assured. All history demonstrates that an ultimate optimism is the only sane view of life. The race may be for the moment walking in dangerous paths, but it is threatened with no general overthrow near or remote. Evolution is no accident, and though its course may at times seem to be retrograde, the general trend is always in the right direction. As a social organism we go on often haltingly, with many stops, and recessions and turnings, but in the long run we draw ever nearer the millennial ideals which the best thinkers of the race hold inspiringly before our view. With or without the aid of any single generation, the good work goes on. Absolute ideals can never be attained, but approximate ideals shall some day be within our grasp. It is the plain duty of every citizen whose experience enables him to see a line further in the right direction than some of his fellows, to add his mite toward furthering the resistless movement; remembering that even though the end is sure it were better that it should come by evolution than by revolution.

Expert Testimony Extraordinary.—The gullibility of mankind in general is proverbial. Yet childlike credulity, when shown by people of education, always excites surprise. A case in point is furnished by a recent habeas corpus proceeding at Poughkeepsie, of which some newspapers made much. A man described as "forger,

swindler, thief, escaped convict, and would-be-murderer" had been transferred from Sing Sing prison to the State hospital for insane criminals. His friends sought to have him legally declared sane, and restored to Sing Sing, hoping then to secure a pardon for him. When the case came to trial, the attorney for the prisoner made, according to newspaper account, the startling announcement that he should show that "the life of his client had been attempted on a scale more deliberate and dilatory than that employed by the Borgias."

To prove this, the prisoner himself was put on the witness stand. He alleged that he was not insane, and that persistent attempts were made to kill him by poisoning his food. The chief conspirators were at least seven in number, including several high State officials, among them four physicians of repute. As minor accomplices, attendants at the asylum were employed to administer the poisons directly in his food. A lawyer employed in his behalf had turned traitor to his cause because of friendship for other high State officials, including the Executive himself; the inference being that these also were interested in carrying out the diabolical plot.

One would think the implications of such a story sufficiently palpable. Paranoia is a form of insanity that has been much exploited before the public of late, and its ear-marks in this case are so plain that mistake would seem impossible. As the judge said in deciding the case later on, the "delusions are almost self-evident, they are so atrocious and improbable, so entirely at variance with all human experience, that the present insanity of the convict is easily discoverable." The only corroborative witnesses giving direct testimony were a chemist who had found enormous quantities of nitro-glycerine in a bottle of wine which the convict's mother, who mother-like was working for her son, alleged to have brought from the asylum; and an attendant who "thought" he had seen another attendant drop "something" on the patient's plate. Beyond the suggestion that the "something" dropped on the plate was very probably a juicy piece of steak, no comment on this testimony seems necessary; unless, indeed, one is led to express surprise that the attorney should allude to the exhibition of enough nitro-glycerine to kill several hundred men as an attempt at "dilatory" poisoning.

But something more should be said regarding the testimony of the two "experts" who testified that they believed the patient to

be "perfectly sane," admitting at the same time that if the story of the poisoning were proven untrue they would regard him as a "dangerous lunatic." They believe, in other words, that a large coterie of men in high place, together with a set of ignorant accomplices, had deliberately set about committing murder, the intended victim being one poor miserable convict who had in no way offended and could in no conceivable way harm most of the alleged conspirators. Morals aside, the imputation is an insult to the intelligence of the gentlemen in question.

Fortunately, the judge, if not an expert in insanity, is at least an expert in common sense, and he soon set the matter right by remanding the patient to the asylum, as "a dangerous lunatic, afflicted with delusions that impel him to crime." As regards the individual case, therefore, all is well; but the residual effects are sure to be harmful. Many persons will remember the allegations where one recalls the outcome of the case, and the unfounded but none the less fixed prejudice against asylums in general, that exists everywhere, will be strengthened, to the public detriment. Not only are the minds of thousands of people who have relatives in asylums needlessly harrowed by such recitals of delusions, but many others will be caused to hesitate by these recitals about sending insane relatives to an asylum for treatment during that early period when alone a cure might be hoped for. Such trials as the one in question are therefore to be regretted, not because of individual results but because they foster popular delusions. And when one reflects that without favorable "expert" testimony such cases would hardly come to trial as a rule, one must doubly regret that credulous "experts" should be found so available. As to the tone of the average newspaper accounts of the trial from day to day, it is useless to speak. In purveying to the perverted tastes of a gullible public, the daily paper is but fulfilling what it seems to think its proper mission. Nothing less than the throwing of a bomb such as was projected at Mr. Sage can be expected to arouse the mind of the average reporter, or the public to which he caters, to the fact that insanity really exists and is not a mere figment of the minds of the keepers of asylums. And even so trenchant an argument as the bomb is apparently soon forgotten, if one may judge from the verdict of a Sheriff's jury in New York City in a recent widely-quoted case.

Treatment of Acute Insanity.—Among the questions which may profitably engage the attention of the Association at the next meeting, none is of greater moment than that of the treatment of acute cases. Commemoration of the Semi-Centenary of the Association will recall the early provision for this class to the exclusion of the others, the long struggle against the one instance of "class legislation" in their favor—the Propositions of 1851—and the final promise of universal provision which terminates the contest in the overthrow of the county system with its horrors of dungeons, cages, fetters, neglect and squalor.

Upon the threshold of another era, the repetition of history brings again into prominence the requirements of the recent insane. Acquiescence of the laity in the pathological conception of insanity, and in the demand of the physician for the care of the insane and for early commitment, urges and requires the best results. To obtain these, attention will be directed to recent and recoverable cases, and measures will be devised for their separation from the dispiriting mass of chronicity. Plans will be studied that quiet may be secured, and unpleasant impressions removed; that acute cases may be seen frequently and conveniently by the senior medical officers; that a body of selected and trained nurses will provide the best care; that a *case* may be observed and studied by itself; that there may be reasonable and proper isolation during the critical stage; in short, that the acute insane may be individualized.

Upon the successful attainment of these requirements rests the distinctively professional character of the hospital. This, in brief, is the problem which now presents itself for solution. The Journal announces it, confident that the great achievements of the past will be supplemented by the intelligence and progress of the future.

Resignation of Dr. P. O. Hooper.—It is with great regret that the Journal announces the resignation of the honored Superintendent of the State Lunatic Asylum at Little Rock, Arkansas. While no reason is given by Dr. Hooper in his letter of resignation for relinquishing a trust that he has always discharged to the entire satisfaction of the people of the State, it is an open secret that he would not sanction the use of the patronage of the institution to serve political ends and thus become *persona non grata*

with the powers that be. His successor is Dr. John J. Robertson, of Little Rock, who for several years past has been physician to the penitentiary.

THE ROME TEMPORARY STATE HOSPITAL.—The State Commission in Lunacy has organized as a temporary State Hospital, under the superintendency of Dr. John F. FitzGerald, of the Binghamton State Hospital, the old Oneida County Asylum, at Rome, N. Y., pending its use as a State institution for unteachable idiots, the last legislature having failed to appropriate funds for its equipment and maintenance for this latter purpose. With this temporary provision it is expected that it will be possible to house all the dependent insane in the State during the present winter.

CIVIL SERVICE EXAMINATIONS.—Open competitive examinations for the positions of Junior Assistant Physicians and Apothecaries in the State Hospitals, will be held at the office of the Civil Service Commission, Albany, Thursday, November 16, 1893, at ten o'clock A. M.

Applicants as Junior Assistant Physicians must be residents of the State of New York, graduates of a legally incorporated medical college, and have had at least one year's actual experience on the staff of a public general hospital. Salary $800 to $1,500 per annum and board.

Applicants as Apothecaries must be residents of the State of New York, at least twenty-one years of age, and must have a license from the State Board of Pharmacy. Salary $500 to $600 per annum and board.

For application blank address New York Civil Service Commission, Albany, N. Y.

DR. FLETCHER BEACH has resigned the superintendency of the well-known Darenth School for Imbeciles, after a service of eighteen years, to receive in his private home at Sidcup, Kent, a limited number of feeble-minded patients, capable of improvement, who require personal supervision and individual care.

OBITUARY.

DR. J. L. F. DELASIAUVE.

Dr. J. L. F. Delasiauve, who for fifty years has stood in the front rank of French alienists, died at Paris on the fifth of June last, at the advanced age of eighty-nine years. Since 1878 he has not been in active service in his specialty, but his mental activity continued, and up to a very late date he took an active part in political matters. Always an ardent republican, it was only his scientific eminence that saved him from proscription during the Empire, of which he was an uncompromising opponent.

He was one of the founders of the Medico-Psychological and Anthropological Societies of Paris and an active worker in medical journalism.

His *Journal de Médécine Mentale* was from 1860 to 1870 one of the leading psychiatrical publications. He leaves a most honorable record and memory.

DR. BLANCHE.

Dr. Blanche, a leading asylum director of Paris, in whose establishment, it may be said, the late Guy de Maupassant ended his life, recently died in that city. He was a well known medical expert in the Paris tribunals, and was a learned and worthy physician.

OFFICIAL NOTICES.

State of New York—State Commission in Lunacy.

Carlos F. MacDonald, President,
Goodwin Brown,
Henry A. Reeves,
} *Commissioners.*

REPORT ON DIETARIES AND FOOD SUPPLIES FOR STATE HOSPITALS.

BY AUSTIN FLINT, M. D., LL. D.,

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New York, *June* 29, 1893.

To the State Commission in Lunacy:

Gentlemen:—In obedience to your request I have the honor to present the following estimates, suggestions, etc., in the matter of food supplies for the State Hospitals for the Insane.

I have carefully examined the dietaries of the various State Hospitals and have but little comment to make upon them. The dietaries seem to be liberal and to present a sufficient variety; but the quantities of supplies are not given. I have no means of knowing anything in regard to the mode of preparation of the food by cooking. This consideration must be left to the executives of the various institutions and is one of the most important of their duties. I can only remark that skillful cooking not alone contributes much to the comfort and well-being of patients, but by reducing waste of material to the minimum, is an important element in economical administration. I do not make this statement merely on general grounds. In 1867, I was appointed by the Commissioners of Public Charities and Correction of the city of New York to inspect the methods of cooking and serving food to the inmates, numbering then more than ten thousand, of the institutions under their charge. After a careful inspection, as requested, I proposed certain changes in the dietaries; and at my suggestion, an accomplished professional cook, at a liberal salary, was put in charge of the kitchens at Bellevue Hospital. As a result of this, not only did the cook save to the institution the sum of his salary, but the cost of maintenance of the patients *per capita* was materially reduced. At that time the number of patients in Bellevue Hospital was between five and six hundred. I suggest, at the beginning, that a thoroughly competent male cook be put in charge of the kitchens in all institutions with five hundred or more inmates; and that he be required to personally supervise all the cooking, and not the cooking for the medical staff only.

In the suggestions that I have to make, I keep in mind the different conditions existing between insane hospitals and penal institutions or ordinary pauper hospitals. The insane, as a rule, are not in your institutions by reason of any fault of their own. Their misfortunes only have committed them to your care. While it may be proper to provide for ordinary paupers and criminals little more than enough to keep them in fair physical condition, the insane poor, though a charge on the State, should receive better consideration. Again, a most important part of the treatment of the insane relates to general nutrition; and many patients suffering from mental diseases require a great abundance of nutritious food, which contributes very largely to their cure and thereby tends to relieve the State from their care and maintenance for a long period. Under this idea, I have endeavored to indicate a quantity and variety of food peculiarly adapted to the insane and suitable to persons in the walk in life from which your patients mainly are drawn. There is little economy in using any but the best material, and there is no excuse for it in the care of the dependent insane. It is to be understood, therefore, that my recommendations involve the purchase of sound and pure articles of food, properly prepared and served. It is recommended, in the purchase of beef, mutton, etc., as a matter of true economy, as well as contributing to the proper quality of supplies, to buy whole carcasses, not the inferior part only, which latter usually contain a large proportion of bone. With the different classes of persons to be provided for—physicians, attendants, workers and non-workers, male and female—nearly every part of an animal can be profitably and economically used. In the purchase of certain other articles, such as coffee and tea, impurities or adulterations, even if not positively harmful, take away from nutritive efficiency and are not in the line of true economy. Flour, milk, eggs, cheese, potatoes, beans, etc., take the place, to a certain extent, of other articles which are more costly. It requires but little experience to learn that the waste of flour, milk, etc., of poor quality, involves more expense than the purchase of first-class articles.

My estimates of quantities are based on the calculations, accepted by all physiologists, of the daily loss of material by the organism.

A healthy man, classed as a non-worker but taking moderate exercise, eliminates about 200 grains of nitrogen and 4,000 grains of carbon in twenty-four hours. A man classed as a worker, eliminates 300 grains of nitrogen and 6,000 grains of carbon. Taking as a standard the non-workers, ten per cent. is to be deducted for women. In making my estimates, I have made a careful study of the dietaries of hospitals for the insane, especially in Great Britain, assuming that these have been adapted to all classes. Army rations may be taken as representing the requirements of workers. The United States Army ration is the best and most liberal of all and has been fully tested in war and in peace. This may properly be adopted as a standard for workers. Taking into consideration the character of those to be provided for in your institutions, I have fixed upon the following as a suitable daily ration for each person, and my estimates are made from this as a basis:

DAILY RATION.

Meat, with bone, including salted meats, fresh and salted fish, and poultry	12 oz.
Flour, to be used in making bread and in cooking (may in part be substituted by cornmeal and macaroni)	16 "
Potatoes	8 "
Milk	8 "
Two eggs	4 "
Sugar	2 "
Butter	2 "
Cheese	2 "
Rice, hominy or oatmeal	1½ "
Beans or peas (dried)	1½ "
Coffee (green)	1 "
Tea (black)	0⅘ "

REMARKS.—Some parts of a bullock contain only 8 per cent. of bone; some parts contain 50 per cent. A high French authority (Payen) estimates that ordinary supplies of meat contain 20 per cent. of bone. The meat includes a considerable but a variable quantity of fat. Veal should never be supplied unless it is of the best quality. A calf, when dressed, should weigh about 130 pounds. The same remark applies to fresh pork. A young hog, when dressed, should weigh 120 to 140 pounds. A dressed sheep should weigh 65 to 120 pounds. A dressed steer should weigh 650 to 900 pounds, the forequarter weighing 190 to 250 pounds, and the hindquarter, 140 to 200 pounds. About 40 per cent. may be deducted for salt pork, hams or bacon. One of the great advantages of skillful cooking is that inferior parts of carcasses may de utilized in the making of nutritious soups, which will take the place, to a great extent, of more costly articles and give more satisfaction to patients; but the meats from which the nutritive matter has been extracted in the making of soups should not be served. Vegetable soups, also, may be largely used with advantage.

One hundred pounds of flour will make 136 pounds of good bread. Corn meal may be substituted for flour, but to a limited extent, as it is less nutritious and often disturbs digestion. Macaroni may be substituted for flour, but only as an occasional luxury. Bread should be made every day, and what is left over should be used in cooking and not be served again. If bread be made during the night and the baking be finished as early as 3 A. M., it may be served the same day. If to be served the next day, it should be baked as late as practicable in the afternoon or evening. If bread be simply warmed through in the oven immediately before serving, the moisture absorbed by the gluten is driven off and the bread is much more palatable and digestible; but bread should never be dried in this way more than once.

Cheese, if of good quality, is a very nutritious article and is too little used in the United States. Its free use will permit a reduction in the ration of butter.

The use of fresh vegetables in season will permit a suspension or reduction of the rations of rice, beans and peas, with some reduction in the ration

of potatoes. Fresh vegetables and fruits should be used freely when produced at the institution. The same may be said of milk and eggs. Onions should be used freely in cooking and should be served occasionally as a separate dish. I have long observed that onions are craved by inmates of hospitals. Turnips, parsnips, salsify, carrots and beets may not strictly be classed as fresh vegetables, but they may be frequently used with advantage.

The ration does not include condiments and other flavoring articles, sirup, molasses, preserves and compotes, such as apple sauce, apple butter, etc., which should be provided as occasion requires.

If men and women are supplied at separate tables, it will be convenient to make up the supplies for each from this daily ration. Five per cent. may be added for men and deducted for women, making a difference of 10 per cent. For workers, an addition of 25 per cent. may be made to the rations of meat, flour and potatoes:

SUPPLIES FOR ONE HUNDRED PERSONS FOR THIRTY DAYS.

Meat, with bone, including salted meat, fresh and salted fish and poultry, total	2,250	lbs.
Flour (may be in part substituted by corn-meal and macaroni)	3,000	"
Potatoes	1,500	"
Milk	750	qts.
Eggs	493	doz.
Sugar	429	lbs.
Butter	429	"
Cheese	429	"
Rice	108	"
Hominy	108	"
Oatmeal	108	"
Coffee	215	"
Tea	26	"

In the estimates of certain of these articles, fractions have been disregarded. The estimates of eggs, sugar, butter, cheese, rice, hominy, oatmeal, coffee and tea are approximative per one hundred persons for thirty days, as it is not contemplated that each and every one of these articles will be supplied to every patient every day in the week. Therefore, the quantities given in the table of "supplies for one hundred persons for thirty days" do not always correspond with the quantities given in the table "daily ration." The daily ration is calculated exactly, according to the physiological requirements of one person; the monthly ration is approximative. The estimate of milk is approximative, one pint being calculated as one pound.

This table of supplies is intended for patients not under extra diet and the attendants only, including men and women, workers and non-workers. It is not intended to include patients under special diet and the staff of physicians. While it is based to a certain extent on recorded experience, I cannot find any estimate of the supplies required for large numbers of persons for a definite time. Inasmuch, also, as the table is a very liberal estimate, based in some degree on theoretical considerations and calculations of the

necessary supply of matters eliminated by the organism, if put in operation, it must be regarded as partly experimental and subject to revision as the result of trial. I therefore suggest, in conclusion, the following:

1. Let one institution be selected, with abundant market facilities and so organized that the chances of fraud or error in reports can be reduced to the minimum.

2. Require this institution to make a monthly report, arranged by weeks (1st week, 2d week, 3d week, 4th week and extra days), embodying:

A. Number of workers—male and femal.
Number of non-workers—male and female.
Number on special diet—male and female.
Number of staff physicians.
Number of other employés—male and female.

B. Supplies on hand at beginning of report, with items.
Supplies purchased, with items and prices (articles produced at the institution to be put in at the market prices).
Supplies remaining over at close of report and carried forward.
A separate report of supplies for the medical staff.
A separate report of extras ordered by the physicians.

A thorough study and analysis of these reports for one year, compared with similar monthly reports from the other institutions, would probably lead to a revised working schedule which would be applicable to all the State Hospitals. The minute reports of the single institution might be taken as a standard of comparison with the reports of the other institutions. Comments and suggestions from the Superintendents should be invited and would undoubtedly prove valuable.

AUSTIN FLINT,
60 East Thirty-Fourth Street, New York City.

State of New York—State Commission in Lunacy.

Present—Carlos F. MacDonald, President,
Goodwin Brown,
Henry A. Reeves,
} *Commissioners.*

Albany, *September* 1, 1893.

To County, Town and City Superintendents of the Poor:

I am directed by the State Commission in Lunacy to inform you that the President of said Commission has ordered that on and after October 1, 1893, the authorities of State Hospitals for the Insane shall send trained attendants to transfer insane patients from their homes or from poor houses to State Hospitals, as provided by Section 6 of Chapter 126 of the Laws of 1890.

The regulations of the Commission, provided by order therof issued December 1, 1892, and designated as form 112, are in all things to be observed except in so far as they may conflict with the order of the President of the Commission above referred to.

County, town and city public officers are directed, in the case of a public patient, to have the medical certificate properly prepared and approved before notifying the Hospital authorities that the patient is ready for removal.

The expense of the medical examination, clothing and preparations for transfer, except as hereinafter provided, will continue to be, as heretofore, a county charge. The State will assume the payment of no bills until the patient is delivered to its agents, and no accounts for transportation will be paid except to or in behalf of such agents after October 1, 1893.

Whenever possible, a few days' notice should be given the Hospital authorities of the transfer of the patient; and when the case is urgent, the notice should be sent by telegraph or telephone, and all reasonable expenses for this purpose will be borne by the State. I am,

Very respectfully yours,

T. E. McGARR, *Secretary.*

STATE OF NEW YORK—STATE COMMISSION IN LUNACY.

Present—CARLOS F. MACDONALD, President,
GOODWIN BROWN,
HENRY A. REEVES,
} *Commissioners.*

In the Matter of the Transfer of Insane Patients from their Homes or from Poor Houses to State Hospitals by Trained Attendants of the latter Institutions, under the provisions of section six of chapter one hundred and twenty-six of the laws of one thousand, eight hundred and ninety.

Section six of chapter one hundred and twenty six of the laws of eighteen hundred and ninety, providing among other things that the President of the State Commission in Lunacy may require State Hospitals to send trained attendants of said Hospitals to bring insane patients from their homes or from poor houses to said Hospitals, and it appearing that the public interests will be best subserved by bringing such patients to State Hospitals in such manner, by reason of the greater economy, better care, and more humane treatment of the patients, it is therefore

ORDERED:

1. The authorities of each State Hospital are hereby directed to send such number of trained attendants as may be necessary to transfer patients supported at public expense from their homes or from poor houses as the case may be, to said State Hospitals.

2. All transfers of insane patients as provided by this order must be made in conformity with the rules prescribed in the order of the Commission dated December first, one thousand, eight hundred and ninety-two and known as form 112.

3. Patients supported at public expense shall be transported only by such public officers as are herein named, but relatives or friends may transfer or accompany such patients at their own expense.

4. This order shall be in effect on and after October first, one thousand, eight hundred and ninety-three.

By the President of the Commission,

September first, eighteen hundred and ninety-three.

[L. S.] T. E. McGARR, *Secretary.*

N.Y. PHOTOGRAVURE CO.

John Leerwen.

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